
Itautec S.A.

TPC Benchmark™ C
Full Disclosure Report
for
Servidor ZX400 1P
using
Microsoft SQL Server 2005
Standard Edition
and
Microsoft Windows Server 2003
Enterprise Edition SP1

First Edition
Submitted April 2006

First Edition – April 12, 2006

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Benchmark results are highly dependent upon workload, specific application requirements, and system design and implementation. Relative system performance will vary as a result for these and other factors. Therefore, TPC Benchmark C should not be used as a substitute for a specific customer application benchmark when critical capacity planning and/or product evaluation decisions are contemplated.

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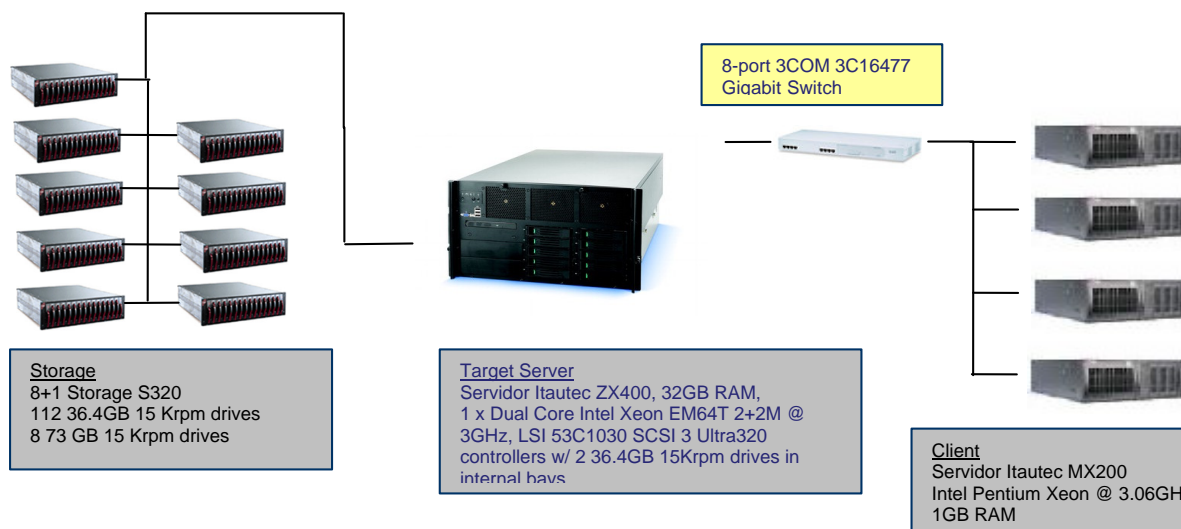


**Servidor Itautec ZX400 1P
C/S with Servidor Itautec
MX200 1P**

TPC-C Rev. 5.6

Report Date: 04/12/2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
R\$ 675,661 BRL	57,552	R\$ BRL / tpmC: 11.74	04/12/2006
Processors	Database Manager	Operating System	Other Software
1 Intel Xeon EM64T, 2 Cores, 4 Threads @ 3GHz - Server 1 Intel Xeon EM64T 3.06 GHz - Client	Microsoft SQL Server 2005 Standard Edition	Windows Server 2003 Enterprise Edition	Microsoft Visual C++ Microsoft COM+
Number of Users			
46,000			



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor/ Cores/Threads	1/2/4	3.0 GHz Intel Xeon EM64T 2+2M w/ 2 MB cache / 800 MHz FSB	1/1/2	3.06 GHz Intel Xeon EM64T w/1MB cache
Memory	16	2GB Register DDR2 @ 400MHz	2	512 MB Register ECC DDR DIMM @ 266 MHz
Disk Controllers	4 1	LSI Logic MegaRAID SCSI 320-2E LSI Logic MegaRAID SCSI 320-2X	1	Intel® 82801EB I/O Controller Hub 5
Disk Drives	114 8	36.4 GB SCSI Drive 15 Krpm 73 GB SCSI Drive 15Krpm	1	80 GB 7200 SATA Drive
Total Storage		4733.6 GB		80 GB

Numerical Quantities Summary

MQTh, Computed Maximum Qualified Throughput

57,552 tpmC

Response Times (in seconds)

	Average	90 th	Max
New Order	0.39	0.63	5.40
Payment	0.35	0.59	4.53
Order Status	0.37	0.61	5.40
Delivery (interactive)	0.11	0.11	1.76
Delivery (deferred)	0.25	0.40	1.08
Stock Level	0.59	0.92	2.60
Menu	0.11	0.11	1.76

Response time delay added for emulated components

Menu 0.1

Resp. 0.1

Transaction Mix, in percent of total transactions

New Order	44.93%
Payment	43.02%
Order-Status	4.01%
Delivery	4.02%
Stock-Level	4.02%

Keying/Think Times (in seconds)

	Min		Average		Max	
New Order	18.02	0.00	18.03	12.07	18.07	120.54
Payment	3.02	0.00	3.03	12.06	3.07	120.54
Delivery	2.02	0.00	2.03	5.06	2.07	50.52
Stock Level	2.02	0.00	2.03	5.07	2.07	50.52
Order Status	2.02	0.00	2.03	10.06	2.06	100.53

Test Duration

Ramp-up time	19 minutes
Measurement interval	120 minutes
Number of checkpoints	4
Checkpoint interval	30 minutes
Number of transactions (all types) completed in measurement interval	15.988.092



Itaotec

Servidor Itaotec ZX400 1P

TPC-C Rev. 5.6

Report Date: Apr 04, 2006

Description	Part Number	Third Party		Unit Price R\$	Quantity	Extended Price	3 yr. Maint. Price
		Brand	Pricing				
Server Hardware							
Servidor Itaotec ZX400 1P							
Base System with 1 x Xeon MP 3.0 GHz/2s2MB 667	C18GX	Itaotec	1	123,966	1	123,966	-
2 GB DDR2-400 SDRAM	I2393	Itaotec	1	-	16	-	-
36 GB Ultra320 15Krpm HDD	Included	Itaotec	1	-	2	-	-
On-Board LAN Broadcom NetXtreme 1000Gbps	Included	Itaotec	1	-	2	-	-
CD-ROM, Internal SCSI Adapter	Included	Itaotec	1	-	1	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	2106_05	Itaotec	1	12,345	1	-	12,345
Monitor 15" Sync Master 591S	I1555	Itaotec	1	330	1	330	-
UPS SMART APC 1	F2643	Itaotec	1	1,621	1	1,621	-
					Subtotal	125,917	12,345
Disk Subsystem							
SCSI RAID Controller U320 2-channel PCI-E	I1710	Itaotec	1	4,110	4	16,440	-
SCSI RAID Controller U320 2-channel PCI-X	G7622	Itaotec	1	3,810	1	3,810	-
36 GB Ultra320 15K rpm	F6853	Itaotec	1	2,420	112	271,040	-
73 GB Ultra320 15K rpm	F4641	Itaotec	1	3,453	8	27,624	-
36 GB Ultra320 15K rpm (10% spare)	F6853	Itaotec	1	2,420	12	-	29,040
73 GB Ultra320 15K rpm (10% spare)	F4641	Itaotec	1	3,453	2	-	6,906
Storage Itaotec S320	F1390	Itaotec	1	20,321	9	182,892	-
Kit Rack for Storage	F1781	Itaotec	1	345	9	3,105	-
Rack Itaotec F2400	F2400	Itaotec	1	5,281	3	15,843	-
					Subtotal	520,754	35,946
Server Software							
Microsoft Windows 2003 Server Enterprise Edition x86	P72-00981	Microsoft	1	-	1	-	-
SQL Server 2005 Standard Edition 32 bits	81852	Microsoft	1	4,115	1	4,115	-
					Subtotal	4,115	-
Client Hardware							
Servidor Itaotec MX-200							
Base System with 1 x Xeon EM64T 3.06GHz/1MB	C0V4F	Itaotec	1	8,657	4	34,628	-
2 x 512MB Memory	Included	Itaotec	1	-	4	-	-
1 x 80GB SATA 7200rpm	Included	Itaotec	1	-	4	-	-
2 x Intel Prof/1000 Server Adapter	Included	Itaotec	1	-	4	-	-
CD-ROM, On-Board LAN	Included	Itaotec	1	-	4	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	001839	Itaotec	1	467	4	-	1,868
Monitor 15" SYNC MASTER 551S	E9801	Itaotec	1	404	4	1,616	-
					Subtotal	36,244	1,868
Client Software							
Microsoft Windows 2003 Server Standard Edition 32 bits	H0085	Microsoft	1	3,376	4	13,504	-
Visual C++ .NET Standard	254-00257	Microsoft	1	336	1	336	-
					Subtotal	13,840	-
Network components							
Switch 16P Baseline 10/100/1000	G9949	Itaotec	1	2,100	2	4,200	-
Switch 16P Baseline 10/100/1000 (spares)	G9949	Itaotec	1	2,100	2	4,200	-
					Subtotal	4,200	-
					TOTAL	705,070	50,159
Large volume purchase with cash in advance Discount on Itaotec Hardware (11.58%)						79,568	
					TOTAL	625,502	50,159
Pricing: 1 - Itaotec						3-Yr. Cost of Ownership:	R\$ 675,661 BRL
						tpmC Rating:	57,552
						R\$ / tpmC:	11.74
Audited By Lorna Livingtree of Performance Metrics Inc.							

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these items, please inform the TPC at pricing@tpc.org.

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Abstract

Overview

This report documents the methodology and results of the TPC Benchmark C test conducted on the Servidor Itautec ZX400 1P. The tests were conducted by Centro de Informática / UFPE in Brazil. The tests were run in a client/server configuration using four Servidor Itautec 1252 as clients. The operating system used for the benchmark was Microsoft Windows Server 2003 Enterprise Edition SP1 for server and Microsoft Windows 2003 Server Standard Edition SP1 for clients. The database was Microsoft SQL Server 2005.

All tests were done in compliance with Revision 5.6 of the Transaction Processing Council's TPC Benchmark C Standard Specification. Two standard TPC Benchmark™ C metrics, transactions per minute (tpmC) and price per tpmC (R\$ BRL/tpmC) are reported and referred to in this document. The results from the tests are summarized below.

Hardware	Software	Total System Cost	tpmC	R\$ BRL/tpmC	Total Solution Availability Date
Servidor Itautec ZX400 1P	Microsoft SQL Server 2005 Standard Edition Microsoft Windows Server 2003 Enterprise Edition SP1	R\$ 675,661 BRL	57,552	R\$ 11.74 BRL	April 12, 2006

Auditor

The benchmark configuration, methodology, and results were audited by Lorna Livingtree of Performance Metrics, Inc. to validate compliance with the TPC specifications.

Preface

The Transaction Processing Performance Council (TPC) developed The TPC Benchmark™ C. The TPC was founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry. This full disclosure report is based on the TPC Benchmark C Standard Specification Version 5.1.

The TPC describes this benchmark in Clause 0.1 of the specification as follows:

Introduction

TPC Benchmark™ C (TPC-C) is an OLTP workload. It is a mixture of read-only and update intensive transactions that simulate the activities found in complex OLTP application environments. It does so by exercising a breadth of system components associated with such environments, which are characterized by:

- The simultaneous execution of multiple transaction types that span a breadth of complexity
- On-line and deferred transaction execution modes
- Multiple on-line terminal sessions
- Moderate system and application execution time
- Significant disk input/output
- Transaction integrity (ACID properties)
- Non-uniform distribution of data access through primary and secondary keys
- Databases consisting of many tables with a wide variety of sizes, attributes, and relationships
- Contention on data access and update

The performance metric reported by TPC-C is a "business throughput" measuring the number of orders processed per minute. Multiple transactions are used to simulate the business activity of processing an order, and each transaction is subject to a response time constraint. The performance metric for this benchmark is expressed in transactions-per-minute-C (tpmC). To be compliant with the TPC-C standard, all references to tpmC results must include the tpmC rate, the associated price-per-tpmC, and the availability date of the priced configuration.

Although these specifications express implementation in terms of a relational data model with conventional locking scheme, the database may be implemented using any commercially available database management system (DBMS), database server, file system, or other data repository that provides a functionally equivalent implementation. The terms "table", "row", and "column" are used in this document only as examples of logical data structures.

TPC-C uses terminology and metrics that are similar to other benchmarks, originated by the TPC or others. Such similarity in terminology does not in any way imply that TPC-C results are comparable to other benchmarks. The only benchmark results comparable to TPC-C are other TPC-C results conformant with the same revision.

Despite the fact that this benchmark offers a rich environment that emulates many OLTP applications, this benchmark does not reflect the entire range of OLTP requirements. In addition, the extent to which a customer can achieve the results reported by a vendor is highly dependent on how closely TPC-C approximates the customer application. The relative performance of systems derived from this benchmark does not necessarily hold for other workloads or environments. Extrapolations to any other environment are not recommended.

Benchmark results are highly dependent upon workload, specific application requirements, and systems design and implementation. Relative system performance will vary as a result of these and other factors. Therefore, TPC-C should not be used as a substitute for a specific customer application benchmarking when critical capacity planning and/or product evaluation decisions are contemplated.

General Items

Benchmark Sponsor

A statement identifying the benchmark sponsor(s) and other participating companies must be provided.

Itautec S.A. was the benchmark sponsor for this TPC Benchmark™ C. The benchmark was developed and engineered by Centro de Informática / UFPE in Brazil.

Application Code and Definition Statements

The application program (as defined in clause 2.1.7) must be disclosed. This includes, but is not limited to, the code implementing the five transactions and the terminal input output functions.

Appendix A contains all source code implemented in this benchmark.

Parameter Settings

Settings must be provided for all customer-tunable parameters and options which have been changed from the defaults found in actual products, including but not limited to:

- *Database tuning options.*
- *Recovery/commit options.*
- *Consistency/locking options.*
- *Operating system and application configuration parameters.*

Appendix C contains the tunable parameters to for the database, the operating system, and the transaction monitor.

Configuration Diagrams

Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences.

The following pages contain the diagrams for both the tested and priced configurations.

Measured Configuration

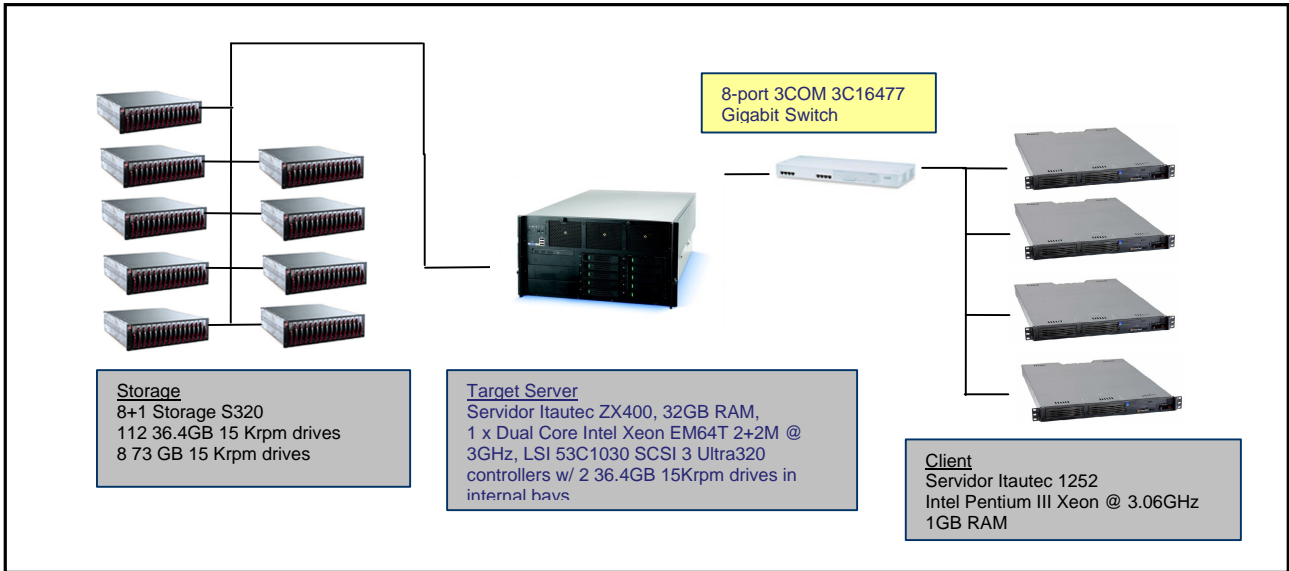


Figure 0.1 Measured Configuration

Priced Configuration

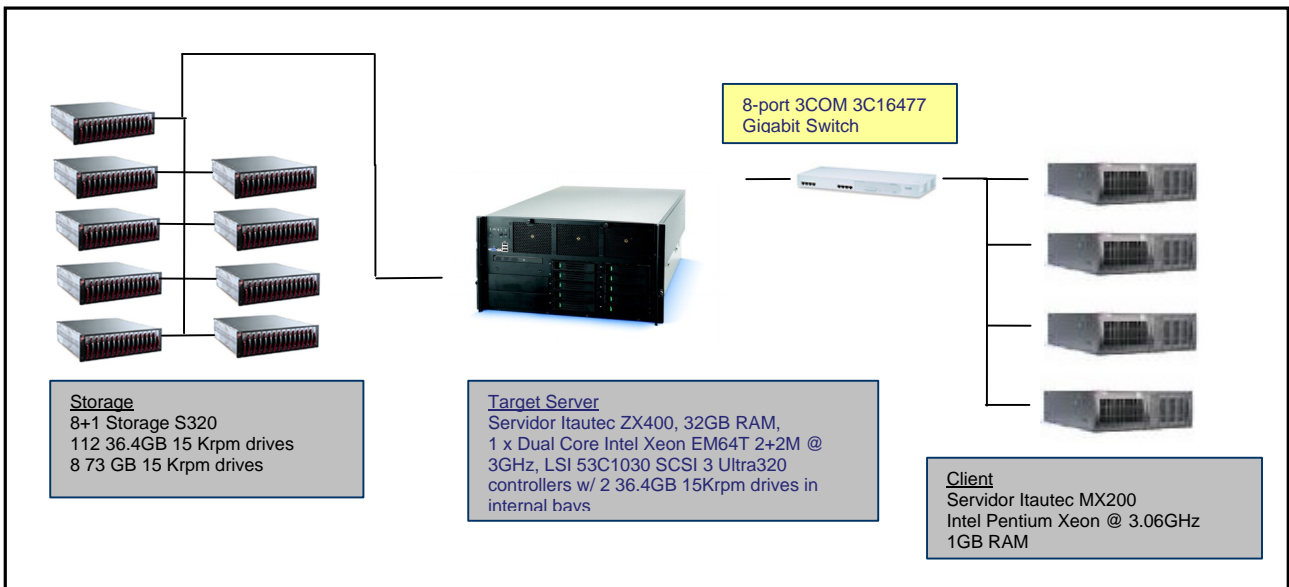


Figure 0.2 Priced Configuration

Clause 1 - Logical Database Design Related Items

Table Definitions

Listings must be provided for all table definition statements and all other statements used to set up the database.

Appendix B contains the code used to define and load the database tables.

Physical Organization of the Database

The physical organization of tables and indices, within the database, must be disclosed.

The tested database configuration used 238 disk drives. The physical organization is documented in Table 4.2: Data Distribution.

Insert and Delete Operations

It must be ascertained that insert and/or delete operations to any of the tables can occur concurrently with the TPC-C transaction mix. Furthermore, any restriction in the SUT database implementation that precludes inserts beyond the limits defined in Clause 1.4.11 must be disclosed. This includes the maximum number of rows that can be inserted and the maximum key value for these new rows.

Insert and delete functions were fully operational during the running of the benchmark.

Horizontal or Vertical Partitioning

While there are few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC-C benchmark (see Clause 1.6), any such partitioning must be disclosed.

Partitioning was not used in this benchmark.

Replication

Replication tables, if used, must be disclosed (see Clause 1.4.6).

Replication was not used in this benchmark.

Table Attributes

Additional and/or duplicated attributes in any table must be disclosed, along with a statement on the impact on performance (see Clause 1.4.7).

No additional attributes were used in this benchmark.

Clause 2 - Transaction and Terminal Profiles Related Items

Random Number Generation

The method of verification for the random number generation must be disclosed.

The random number generation was handled internally in the Microsoft BenchCraft RTE program. The independent auditing process verified this.

Screen Layout

The actual layouts of the terminal input/output screens must be disclosed.

All screen layouts followed the Standard Specifications.

Terminal Verification

The method used to verify that the emulated terminals provide all the features described in Clause 2.2.2.4 must be explained. Although not specifically priced, the type and model of the terminals used for the demonstration in 8.1.3.3 must be disclosed and commercially available (including supporting software and maintenance).

The auditor with a thorough execution of the five transaction types, using Microsoft Internet Explorer, verified the terminal features.

Intelligent Terminals

Any usage of presentation managers or intelligent terminals must be explained.

Comment 1: *The intent of this clause is to describe any special manipulations performed by a local terminal or workstation to off-load work from the SUT. This includes, but is not limited to: screen presentations; message bundling, and local storage of TPC-C rows.*

Comment 2: *This disclosure also requires that all data manipulation functions performed by the local terminal to provide navigational aids for transaction(s) must also be described. Within this disclosure, the purpose of such additional function(s) must be explained.*

The application code responsible for processing the data was executed on the clients. HTML Screen manipulation commands were downloaded to the web browser, which controlled the input and output graphics. This code is documented in Appendix A. IIS (Microsoft Internet Information Server) was involved in processing and presenting this data.

Transaction Profiles

The percentage of home and remote order-lines in the New-Order transactions must be disclosed.

The percentage of New-Order transactions that was rolled back as a result of an unused item number must be disclosed.

The number of items per orders entered by New-Order transactions must be disclosed.

The percentage of home and remote Payment transactions must be disclosed.

The percentage of Payment and Order-Status transactions that used non-primary key (C_LAST) access to the database must be disclosed.

The percentage of Delivery transactions that were skipped as a result of an insufficient number of rows in the NEW-ORDER table must be disclosed.

Table 2.1: Transaction Statistics

Transaction	Function	Value
New Order	Home Warehouse Order Lines	99.00%
	Remote Warehouse Order Lines	1.00%
	Rolled Back Transactions	1.00%
	Average Lines Per Order	10.00
Payment	Home Warehouse Transactions	84.99%
	Remote Warehouse Transactions	15.01%
	Non-Primary Key Access	60.00%
Order Status	Non-Primary Key Access	60.13%
Delivery	Delivery Transactions Skipped	0

Transaction Mix

The mix (i.e., percentages) of transaction types seen by the SUT must be disclosed. (8.1.3.11)

Table 2.2: Transaction Mix

Transaction	Percentage
New Order	44,93%
Payment	43,02%
Order Status	4,01%
Delivery	4,02%
Stock Level	4,02%

Deferred Delivery Mechanism

The queuing mechanism used to defer execution of the Delivery transaction must be disclosed.

Microsoft COM+ components installed on each Web Client create a pool of threads connected to the database, responsible for processing delivery transactions. When the application on the Web Client side receives a request for a delivery transaction, one of the threads is assigned for processing it while the control is immediately returned to the user (RTE). Upon completion, the thread writes an entry in the delivery log and returns to the thread pool.

The source code is listed in Appendix A.

Clause 3 - Transaction and System Properties Related Items

The results of the ACID test must be disclosed, along with a description of how the ACID requirements were met. This includes disclosing which case was followed for the execution of Isolation Test 7.

All ACID tests were conducted successfully according to specification.

Atomicity

The system under test must guarantee that database transactions are atomic; the system will either perform all individual operations on the data, or will assure that no partially completed operations leave any effects on the data.

Completed Transaction

A row was selected in a script from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was committed and the rows were verified to contain correctly updated balances.

Aborted Transaction

A row was selected in a script from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was rolled back and the rows were verified to contain the original balances.

Consistency

Consistency is the property of the application that requires any execution of a database transaction to take the database from one consistent state to another, assuming that the database is initially in a consistent state.

Consistency conditions one through four were tested using a script to issue queries to the database. The results of the queries verified that the database was consistent for all four tests. A run was executed under full load lasting over two hours and including several checkpoints. The script was re-executed and the result of the same queries verified that the database remained consistent after the run.

Isolation

Sufficient conditions must be enabled at either the system or application level to ensure the required isolation defined above (clause 3.4.1) is obtained.

Isolation tests one through nine were executed using shell scripts to issue queries to the database. Each script included timestamps to demonstrate the concurrency of operations. The results of the queries were captured to files. The auditor to demonstrate the required isolation had been met reviewed and verified the captured files.

In addition, the phantom tests and the stock level tests were executed and verified.

For Isolation test seven, case A was followed.

Durability

The tested system must guarantee durability: the ability to preserve the effects of committed transaction and insure database consistency after recovery from any one of the failures listed in Clause 3.5.3.

Loss of Data / Loss of Log

To demonstrate recovery from a permanent failure of durable media containing TPC-C tables, the following steps were executed:

- 1) A 4600 warehouse database was generated.
- 2) The database was backed up using SQL scripts.
- 3) A sum of D_NEXT_O_ID was recorded.
- 4) The RTEs were started with 10% of the benchmark users (46,000).
- 5) The system was run in steady state for 10 minutes.

- 6) One log disk was removed from the drive cabinet. No interruption occurred.
- 7) Keep running more 10 minutes.
- 8) One data disk was removed, causing an SQL Server error.
- 9) The RTE was stopped.
- 10) SQL Server was stopped and restarted.
- 11) The transaction log was dumped to disk.
- 12) SQL Server was stopped, the Windows was shutdown and the machine powered off.
- 13) The failed disk was replaced.
- 14) The machine was powered on.
- 15) SQL Server was started.
- 16) The database and the transaction log were restored from backup.
- 17) The sum of D_NEXT_O_ID was taken.
- 18) This number was compared with the number of new orders reported by the RTE.
- 19) Consistency test #3 was executed and verified.

Instantaneous Interruption and Loss of Memory

To validate system recovery an instantaneous interruption was caused by removing power to the Server, the following steps were executed:

- 1) A sum of D_NEXT_O_ID was taken.
- 2) 46,000 users were started via the RTEs.
- 3) The system was run in steady state for 5 minutes.
- 4) The power supply cord was removed from the server, causing instantaneous interruption.
- 5) The RTE's were stopped.
- 6) Power was reconnected and the system was rebooted.
- 7) SQL Server was started and the recovery process completed successfully.
- 8) A new count of D_NEXT_O_ID was taken.
- 9) This number was validated against the calculated number reported by the RTEs.

Clause 4: Scaling and Database Population Related Items

Cardinality of the Tables

The cardinality (e.g., the number of rows) of each table, as it existed at the start of the benchmark run (see Clause 4.2), must be disclosed. If the database was over-scaled and inactive rows of the WAREHOUSE table were deleted (see Clause 4.2.2), the cardinality of the WAREHOUSE table as initially configured and the number of rows deleted must be disclosed.

The database was generated with 4600 warehouses, and the audited performance run used 4600 warehouses.

Table 4.1: Table Cardinality

Table	Initial Cardinality
Warehouse	4600
District	46000
Customer	138000000
New Order	41400000
Orders	138000000
History	138000000
Order Line	1380000000
Item	100000
Stock	460000000
Deleted Warehouses	0

Distribution of Database Tables and Logs

The distribution of tables and logs across all media must be explicitly depicted for the tested and priced systems.

The system was configured with 112 36.4GB 15Krpm SCSI disks. There were 112 disks connected to 4 controllers configured as RAID 0 and 8 disks connected to one controller and configured as RAID 0+1. The operating system was stored in one 36.4GB 15Krpm disk. The OS disk was connected to the server onboard controller in one internal bay as the log disks. Most logical data drives contained 3 partitions for miscellaneous, customer and stock, and backup data. Raw file systems were used except for the NTFS formatted backup and OS partitions. The configuration is further detailed below in Table 4.2.

Database Model

A statement must be provided that describes:

1. The data model implemented by the DBMS used (e.g., relational, network, hierarchical)
2. The database interface (e.g., embedded, call level) and access language (e.g., SQL, DL/I, COBOL read/write) used to implement the TPC-C transactions. If more than one interface/access language is used to implement TPC-C, each interface/access language must be described and a list of which interface/access language is used with which transaction type must be disclosed.

Microsoft SQL Server 2005 Standard Edition is a relational DBMS.

The interface used was Microsoft SQL Server stored procedures accessed with Remote Procedure Calls embedded in C code using the Microsoft ODBC interface.

Table 4.2: Data Distribution

Controller	DB Components	Partition	Size	Disks
1	Miscellaneous Customer and Stock	G:\ H:\	40,000 MB 80,000 MB	28 – 36 GB 15K
2	Miscellaneous Customer and Stock	I:\ J:\	40,000 MB 80,000 MB	28 – 36 GB 15K
3	Miscellaneous Customer and Stock	M:\ N:\	40,000 MB 80,000 MB	28 – 36 GB 15K
4	Miscellaneous Customer and Stock	O:\ P:\	40,000 MB 80,000 MB	28 – 36 GB 15K
5	Log	L:\	240,000 MB	8 – 73 GB 15K

Mapping Partitions/Replication

The mapping of database partitions/replications must be explicitly described.

No partitioning or replication was used.

60-Day Space

Details of the 60-day space computations along with proof that the database is configured to sustain 8 hours of growth for the dynamic tables (Order, Order-Line, and History) must be disclosed (see Clause 4.2.3).

To calculate the space required to sustain the database log for 8 hours of growth at steady state, the following steps were followed:

1. The current log space was recorded by running *dbcc sqlperf(logspace)*
2. Transactions were run against the database with a full user load.
3. The final log space usage was recorded by running *dbcc sqlperf(logspace)*
4. The space used was calculated as the difference between the first and second queries.
5. The number of NEW-ORDERS was retrieved from the RTE report generated for the entire run.
6. The total space used was divided by the number of NEW-ORDERS producing a size per NEW-ORDER.
7. The NEW-ORDER size was multiplied by the measured tpmC rate and multiplied by 480 minutes.

The same methodology was used to compute growth requirements for dynamic tables Order, Order-Line and History.

The details of the 8-hour transaction log space and the 60-day space requirements are shown in Appendix D.

Clause 5: Performance Metrics and Response Time Related Items

Measured tpmC

Measured tpmC must be reported.

Measured tpmC: **57,552** tpmC

Price per tpmC: **R\$ 11.74 BRL** per tpmC

Response Times

Ninetieth percentile, maximum and average response times must be reported for all transaction types as well as for the menu response time.

Table 5.1: Response Times

Transaction	Average	90%	Maximum
New order	0.39	0.63	5.40
Payment	0.35	0.59	4.53
Order Status	0.37	0.61	5.40
Delivery (interactive)	0.11	0.11	1.76
Delivery (deferred)	0.25	0.40	1.08
Stock Level	0.59	0.92	2.60
Menu	0.11	0.11	1.76

Keying and Think Times

The minimum, the average, and the maximum keying and think times must be reported for each transaction type.

Table 5.2: Keying Times

Transaction	Average	Minimum	Maximum
New Order	18.03	18.02	18.07
Payment	3.03	3.02	3.07
Delivery	2.03	2.02	2.07
Stock Level	2.03	2.02	2.07
Order Status	2.03	2.02	2.06

Table 5.3: Think Times

Transaction	Average	Minimum	Maximum
New Order	12,06	0.00	120.54
Payment	12,06	0.00	120.54
Delivery	5,06	0.00	50.52
Stock Level	5,07	0.00	50.52
Order Status	10,06	0.00	100.53

Response Time Distribution Curves

Response time frequency distribution curves (see Clause 5.6.1) must be reported for each transaction type.

Figure 5.1 - New-Order Transaction Response Time Distribution

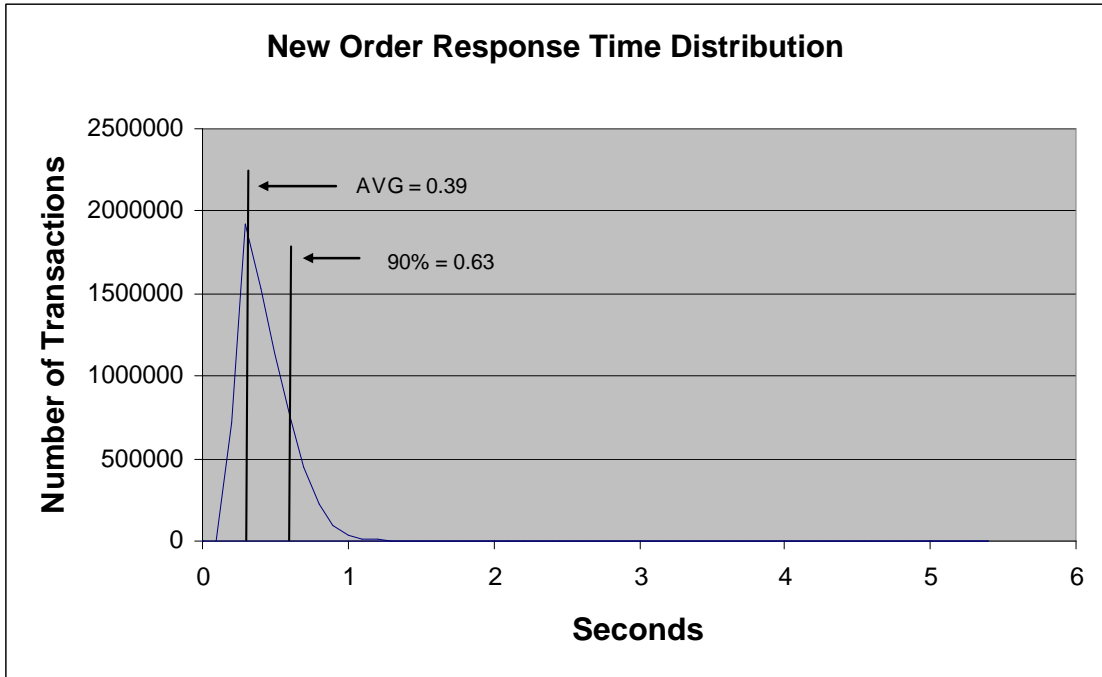


Figure 5.2 - Payment Transaction Response Time Distribution

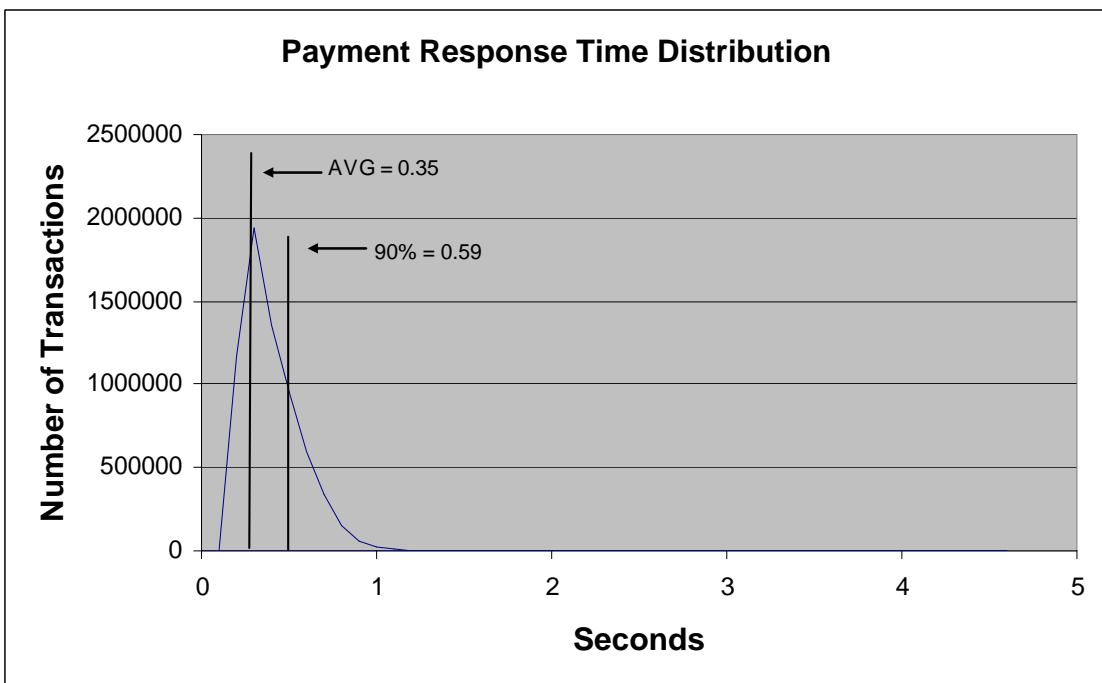


Figure 5.3 Stock Level Transaction Response Time Distribution

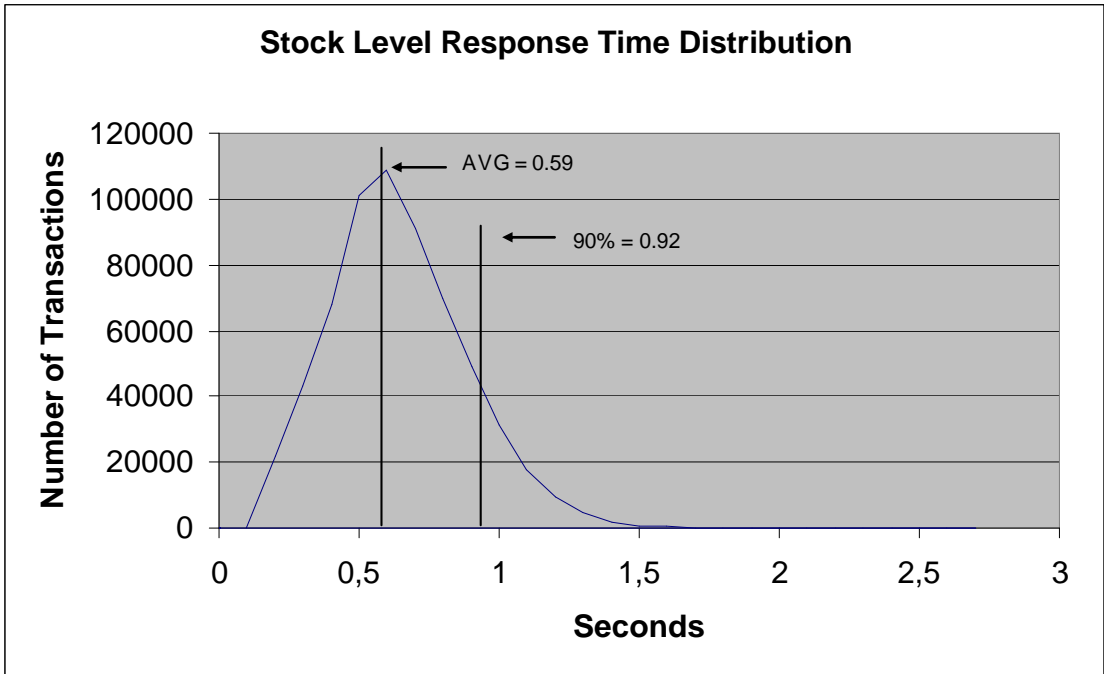


Figure 5.4 Order Status Transaction Response Time Distribution

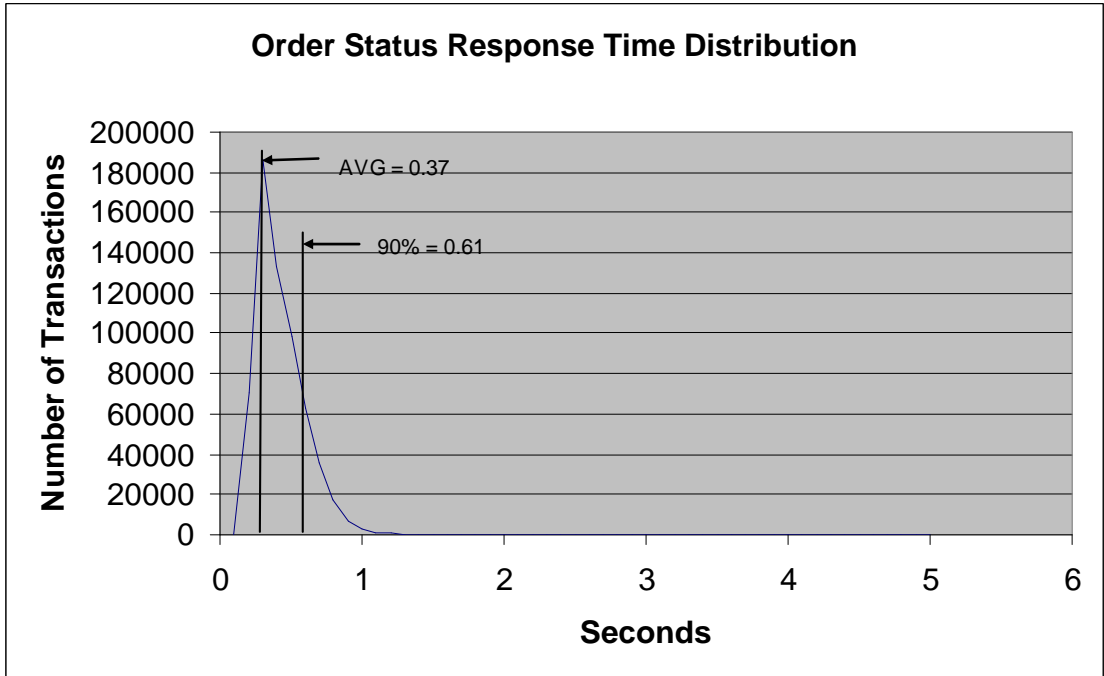


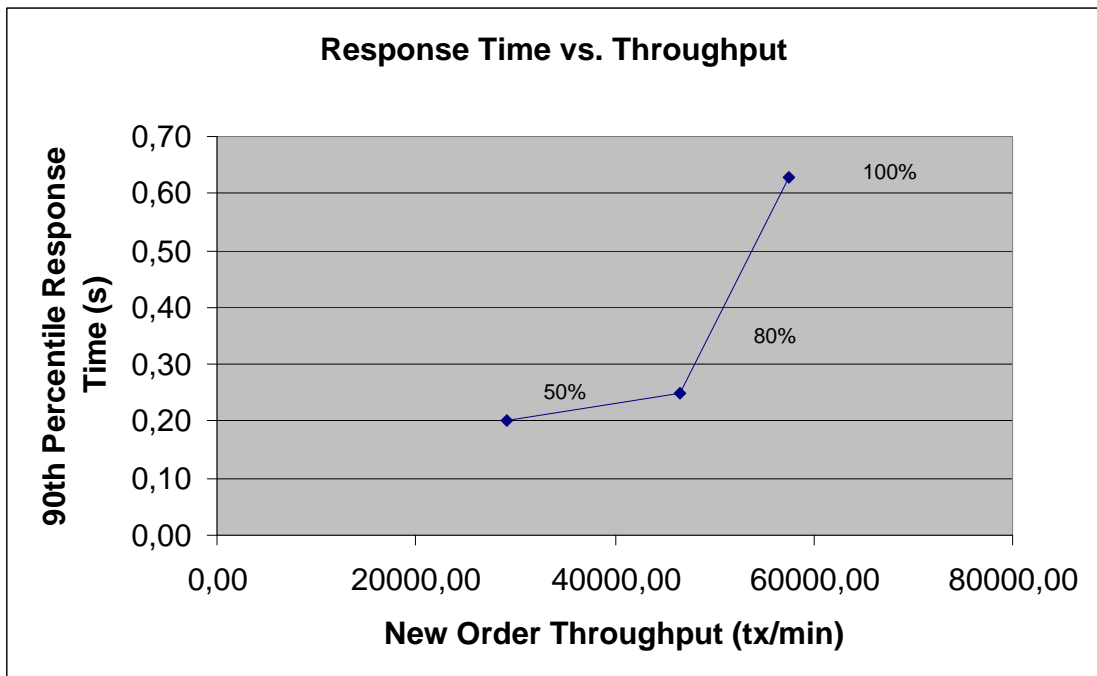
Figure 5.5 Delivery Transaction Response Time Distribution



New Order Response Time vs. Throughput Performance

The performance curve for response time vs. throughput (see Clause 5.6.2) must be reported for the New-Order transaction.

Figure 5.6 New Order Response Time vs. Throughput



New Order Think Time Distribution

Think Time frequency distribution curves (see Clause 5.6.3) must be reported for the New-Order transaction.

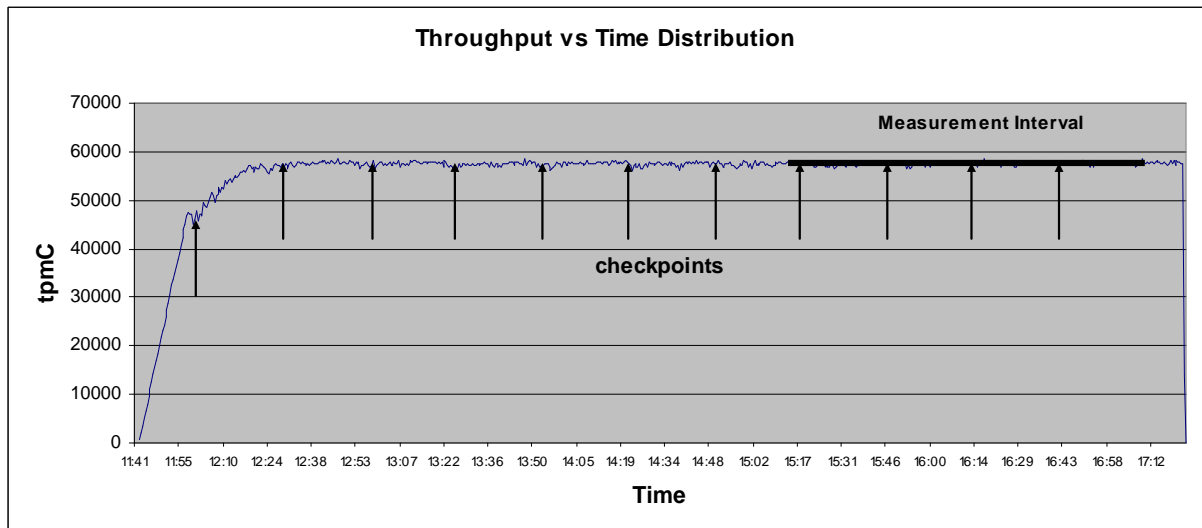
Figure 5.7 New Order Think Time Distribution



New Order Throughput vs. Elapsed Time

A graph of throughput versus elapsed time (see Clause 5.6.4) must be reported for the New-Order transaction.

Figure 5.8 Throughput vs. Time Distribution



Steady State Methodology

The method used to determine that the SUT had reached a steady state prior to commencing the measurement interval (see Clause 5.5) must be described.

By using the monitoring tools on the RTE, a steady state was determined. Figure 5.8 further supports the level chosen by the utilities used.

Work Performed During Steady State

A description of how the work normally performed during a sustained test (for example checkpointing, writing redo/undo log records, etc.), actually occurred during the measurement interval must be reported.

A checkpoint in Microsoft SQL Server writes to disk all updated memory pages that have not been yet actually written to disk. A checkpoint script, which issues specified number of checkpoint at specified (30 minutes) intervals, was started after all users logged in and sending transactions.

Measurement Period Duration and Checkpoint Duration

The start time and duration in seconds of at least the four (4) longest checkpoints during the Measurement Interval must be disclosed (see Clause 5.5.2.2 (2)).[Clause 8.1.6.11]

A statement of the duration of the measurement interval for the reported Maximum Qualified Throughput (tpmC) must be included.[Clause 8.1.6.12]

Table 5.9: Checkpoints

	Start	End	Duration (in seconds)
Measurement Interval	15:15:50	17:15:50	7200
1 st Checkpoint	15:22:33	15:40:26	1795
2 nd Checkpoint	15:52:28	16:10:14	1795
3 rd Checkpoint	16:22:23	16:39:22	1795
4 th Checkpoint	16:52:19	17:10:01	1795

Regulation of Transaction Mix

The method of regulation of the transaction mix (e.g., card decks or weighted random distribution) must be described. If weighted distribution is used and the RTE adjusts the weights associated with each transaction type, the maximum adjustments to the weight from the initial value must be disclosed

The RTE was given a weighted random distribution that could not be adjusted during the run.

Transaction Statistics

The percentage of the total mix for each transaction type must be disclosed.

The percentage of New-Order transactions rolled back as a result of invalid item number must be disclosed.

The average number of order-lines entered per New-Order transaction must be disclosed.

The percentage of remote order lines per New-Order transaction must be disclosed.

The percentage of remote Payment transactions must be disclosed.

The percentage of customer selections by customer last name in the Payment and Order-Status transactions must be disclosed.

The percentage of Delivery transactions skipped due to there being fewer than necessary orders in the New-Order table must be disclosed.

The above statistics are disclosed in Table 2.1.

Checkpoint Count and Location

The number of checkpoints in the Measurement Interval, the time in seconds from the start of the Measurement Interval to the first checkpoint, and the Checkpoint Interval must be disclosed.

There was one checkpoint before measurement and four checkpoints during measurement. The time of the first checkpoint during the measurement interval is 1795 seconds from the start of the measurement, and the checkpoint interval is 30 minutes.

Clause 6: SUT, Driver, and Communication Definition Related Items

RTE Parameters

The RTE input parameters, code fragments, functions, etc. used to generate each transaction input field must be disclosed. (8.1.7.1)

Comment: *The intent is to demonstrate the RTE was configured to generate transaction input data as specified in Clause 2.*

The RTE input parameters are listed in Appendix C - Tunable Parameters.

Lost Terminal Connections

The number of terminal connections lost during the Measurement Interval must be disclosed.

No terminal connections were lost.

Emulated Components

It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to that of the priced system. The results of the test described in Clause 6.6.3.4 must be disclosed. (8.1.7.2)

No components were emulated.

Benchmarked and Targeted System Configuration Diagrams

A complete functional diagram of both the benchmark configuration and the configuration of the proposed (target) system must be disclosed. A detailed list of all software and hardware functionality being performed on the Driver System, and its interface to the SUT must be disclosed (see Clause 6.6.3.6). (8.1.7.3)

The driver system performed transaction data generation and communication to the client through the standard Web browser (HTTP) protocol. It also captured and time stamped the SUT output data for post-processing of the reported metrics. No other functionality was included on the driver system.

Figures 0.1 and 0.2 of this report contain detailed diagrams of both the benchmark configuration and the priced configuration.

Network Configuration

The network configurations of both the tested services and the proposed (target) services which are being represented and a thorough explanation of exactly which parts of the proposed configuration are being replaced on the Driver System must be disclosed (see Clause 6.6.4). (8.1.7.4)

The network configurations of the benchmarked and priced configurations were identical.

Network Bandwidth

The bandwidth of the network(s) used in the tested/priced configuration must be disclosed. (8.1.7.5)

The bandwidth of the tested and priced networks were as follows:

- 100 BaseT (100 Mbit/sec) between the RTE and the clients
- 1000 BaseT (1000 Mbit/sec) between the Clients and Server.

Operator Intervention

If the configuration requires operator intervention (see Clause 6.6.6), the mechanism and the frequency of this intervention must be disclosed. (8.1.7.6)

This configuration does not require any operator intervention to sustain eight hours of the reported throughput.

Clause 7 - Pricing Related Items

Hardware and Software List

A detailed list of hardware and software used in the priced system must be reported. Each separately orderable item must have vendor part number, description, and release/revision level, and either general availability status or committed delivery date. If package-pricing is used, vendor part number of the package and a description uniquely identifying each of the components of the package must be disclosed. Pricing source(s) and effective date(s) of price(s) must also be reported. (8.1.8.1)

The total 5-year price of the entire configuration must be reported, including: hardware, software, and maintenance charges. Separate component pricing is recommended. The basis of all discounts used must be disclosed. (8.1.8.2)

The details of the hardware and software are reported in the front of this report as part of the executive summary. All third party quotations, if exist, are included at the end of this report as Appendix E.

Availability Date

The committed delivery date for general availability (availability date) of products used in the price calculations must be reported. When the priced system includes products with different availability dates, the reported availability date for the priced system must be the date at which all components are committed to be available. (8.1.8.3)

Hardware Availability Date: 04/12/2006

Software Availability Date: 04/12/2006

Measured TpmC

A statement of the measured tpmC, as well as the respective calculations for 5-year pricing, price/performance (price/tpmC), and the availability date must be included. (8.1.8.4)

Maximum Qualified Throughput: 57,552 tpmC

Price Performance Metric: R\$ 11.74 BRL

Country Specific Pricing

Additional Clause 7 related items may be included in the Full Disclosure Report for each country specific priced configuration. Country specific pricing is subject to Clause 7.1.7. (8.1.8.5)

This system is priced for Brazil.

Usage Pricing

For any usage pricing, the sponsor must disclose (8.1.8.6):

- *Usage level at which the component was priced.*
- *A statement of the company policy allowing such pricing.*

Comment: *Usage pricing may include, but is not limited to, the operating system and database management software.*

The component pricing based on usage is shown below:

- 4 Microsoft Windows 2003 Standard Server Licenses
- 1 Microsoft Windows Server 2003 Enterprise Edition License
- 1 Microsoft SQL Server 2005 Standard Edition Licenses (per processor)
- 1 Microsoft Visual C++ 32 bit Edition
- 3 Year Support for Hardware Components.

System Pricing

System pricing should include subtotals for the following components: Server Hardware, Server Software, Client Hardware, Client Software, and Network Components used for terminal connection (see Clause 7.2.2.3). Clause 6.1 describes the Server and Client components. An example of the standard pricing sheet is shown in Appendix B. (8.1.8.7)

System pricing must include line item indication where non-sponsoring companies' brands are used. System pricing must also include line item indication of third party pricing. See example in Appendix B. (8.1.8.8)

The details of the hardware and software are reported in the front of this report as part of the Executive Summary.

Clause 9 - Audit Related Items

Auditor

The auditor's name, address, phone number, and a copy of the auditor's attestation letter indicating compliance must be included in the Full Disclosure Report. (8.1.9.1)

A review of the pricing model is required to ensure that all components required are priced (see Clause 9.2.8). The auditor is not required to review the final Full Disclosure Report or the final pricing prior to issuing the attestations letter. (8.1.9.2)

This TPC-C benchmark has been audited by Lorna Livingtree of Performance Metrics.

Availability of the Full Disclosure Report

The Full Disclosure Report must be readily available to the public at a reasonable charge, similar to the charges for similar documents by the test sponsor. The report must be made available when results are made public. In order to use the phrase "TPC Benchmark™ C", the Full Disclosure Report must have been submitted to the TPC Administrator as well as written permission obtained to distribute same.

Requests for this TPC Benchmark C Full Disclosure Report should be sent to:

Transaction Processing Performance Council
c/o Administrator, TPC
Presidio of San Francisco
Bldg 572B Ruger St.
San Francisco, CA 94129-0920
Phone: (415) 561-6272, fax (415) 561-6120
www.tpc.org

or:

Itautec S.A.
Rua Santa Catarina, 1
030860-025 – São Paulo – SP
Phone: +55 (11) 6097-3000, fax +55 (11) 6097-4284

or:

Laboratório de Análise de Performance
Centro de Informática / UFPE
Rua Prof. Luis Freire, S/N – Cidade Universitária
50740-540 – Recife – PE
Phone: +55 (81) 3453-9213

PERFORMANCE METRICS INC.
TPC Certified Auditors



April 10, 2006

Mr. Fábio Ávila Rêgo Pessoa
Itautec Performance Lab
Centro de Informática – UFPE
Recife, Brazil

I have verified by remote the TPC Benchmark™ C for the following configuration:

Platform: Servidor Itautec ZX400
Database Manager: Microsoft SQL Server 2005
Operating System: Microsoft Windows 2003 Server, Enterprise Edition
Transaction Monitor: Microsoft COM+

System Under Test:				
CPU's	Memory	Disks (total)	90% Response	TpmC
1 Intel Xeon @ 3 Ghz	Main: 32 GB	122 @ 36GB	0.63	57,552
4 Clients each with:				
1 Intel Xeon @ 3.06 Ghz	Main: 1 GB	1 @ 76 GB	Na	Na

In my opinion, these performance results were produced in compliance with the TPC requirements for the benchmark. The following attributes of the benchmark were given special attention:

- The transactions were correctly implemented.
- The database files were properly sized and populated.
- The database was properly scaled with 4,600 warehouses, all of which were active during the measured interval.

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- The ACID properties were successfully demonstrated.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was present on the tested system.
- Eight hours of growth space for the dynamic tables was present on the tested system.
- The data for the 60 day space calculation was verified.
- The controller cache was disabled on the log disk controller.
- The steady state portion of the test was 120 minutes.
- At least one checkpoint was taken before the measured interval in steady state.
- Four complete checkpoints were taken during the measured interval.
- The system pricing was checked for major components and maintenance.

Auditor Notes:

The client machines used in the tested configuration are no longer orderable from the sponsor. The clients substituted in the priced configuration meet the substitution requirements.

Sincerely,



Lorna Livingtree
Auditor

PERFORMANCE METRICS INC.
TPC Certified Auditors

Appendix A – Source Code

isapi_dll/src/tpcc.def

```
LIBRARY TPCC.DLL
```

```
EXPORTS
```

```
    GetExtensionVersion @1
    HttpExtensionProc   @2
    TerminateExtension @3
```

Isapi_dll/src/tpcc.h

```
/*      FILE:          TPCC.H          Microsoft TPC-C
 *
 * Kit Ver. 4.20.000
 *
 *      Copyright
 *      Microsoft, 1999
 *      All Rights Reserved
 *
 *
 *      Version
 *      4.10.000 audited by Richard Gimarc, Performance
 *      Metrics, 3/17/99
 *
 *      PURPOSE:  Header file for ISAPI TPCC.DLL,
 *      defines structures and functions used in the isapi
 *      tpcc.dll.
 *
 */

//VERSION RESOURCE DEFINES
#define _APS_NEXT_RESOURCE_VALUE
    101
#define _APS_NEXT_COMMAND_VALUE
    40001
#define _APS_NEXT_CONTROL_VALUE
    1000
#define _APS_NEXT_SYMED_VALUE
    101

#define TP_MAX_RETRIES
    50

//note that the welcome form must be processed first as
//terminal ids assigned here, once the
//terminal id is assigned then the forms can be
//processed in any order.
#define WELCOME_FORM
    1
    //beginning form no term id assigned, form id
#define MAIN_MENU_FORM
    2
    //term id assigned main menu form id
#define NEW_ORDER_FORM
    3
    //new
order form id
```

```
#define PAYMENT_FORM
    4
    //payment form id
#define DELIVERY_FORM
    5
    //delivery form id
#define ORDER_STATUS_FORM
    6
    //order status
id
#define STOCK_LEVEL_FORM
    7
    //stock level
form id

//This macro is used to prevent the compiler error
unused formal parameter
#define UNUSEDPARAM(x) (x = x)

//This structure defines the data necessary to keep
distinct for each terminal or client connection.
typedef struct _CLIENTDATA
{
    int
    iNextFree;
    //index of next
free element or -1 if this entry in
use.
    int
    w_id;
    //warehouse id
assigned at welcome form
    int
    d_id;
    //district id
assigned at welcome form
    int
    iSyncId;
    //synchronization id
    int
    iTickCount;
    //time of last
access;
    CTPCC_BASE
    *pTxn;
} CLIENTDATA, *PCLIENTDATA;

//This structure is used to define the operational
interface for terminal id support
typedef struct _TERM
{
    int
    iNumEntries;
    //total allocated terminal array entries
    int
    iFreeList;
    //next available terminal array
element or -1 if none
    int
    iMasterSyncId;
    //synchronization id
    CLIENTDATA
    *pClientData;
    //pointer to
allocated client data
} TERM;
typedef TERM *PTERM;
terminal structure type
    //pointer to
enum WEBERROR
{
```

```
NO_ERR,
ERR_COMMAND_UNDEFINED,
ERR_D_ID_INVALID,
ERR_DELIVERY_CARRIER_ID_RANGE,
ERR_DELIVERY_CARRIER_INVALID,
ERR_DELIVERY_MISSING_OCD_KEY,
ERR_DELIVERY_THREAD_FAILED,
ERR_GETPROCADDR_FAILED,
ERR_HTML_ILL_FORMED,
ERR_INVALID_SYNC_CONNECTION,
ERR_INVALID_TERMID,
ERR_LOADDLL_FAILED,
ERR_MAX_CONNECTIONS_EXCEEDED,
ERR_MEM_ALLOC_FAILED,
ERR_MISSING_REGISTRY_ENTRIES,
ERR_NEWORDER_CUSTOMER_INVALID,
ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_DISTRICT_INVALID,
ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_ITEMID_INVALID,
ERR_NEWORDER_ITEMID_RANGE,
ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_MISSING_SUPPW_KEY,
ERR_NEWORDER_NOITEMS_ENTERED,
ERR_NEWORDER_QTY_INVALID,
ERR_NEWORDER_QTY_RANGE,
ERR_NEWORDER_QTY_WITHOUT_SUPPW,
ERR_NEWORDER_SUPPW_INVALID,
ERR_NO_SERVER_SPECIFIED,
ERR_ORDERSTATUS_CID_AND_CLT,
ERR_ORDERSTATUS_CID_INVALID,
ERR_ORDERSTATUS_CLT_RANGE,
ERR_ORDERSTATUS_DID_INVALID,
ERR_ORDERSTATUS_MISSING_CID_CLT,
ERR_ORDERSTATUS_MISSING_CID_KEY,
ERR_ORDERSTATUS_MISSING_CLT_KEY,
ERR_ORDERSTATUS_MISSING_DID_KEY,
ERR_PAYMENT_CDI_INVALID,
ERR_PAYMENT_CID_AND_CLT,
ERR_PAYMENT_CUSTOMER_INVALID,
ERR_PAYMENT_CWI_INVALID,
ERR_PAYMENT_DISTRICT_INVALID,
ERR_PAYMENT_HAM_INVALID,
ERR_PAYMENT_HAM_RANGE,
ERR_PAYMENT_LAST_NAME_TO_LONG,
ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_MISSING_CID_CLT,
ERR_PAYMENT_MISSING_CID_KEY,
ERR_PAYMENT_MISSING_CLT,
ERR_PAYMENT_MISSING_CLT_KEY,
ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_MISSING_HAM_KEY,
ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID,
ERR_STOCKLEVEL_THRESHOLD_RANGE,
ERR_VERSION_MISMATCH,
ERR_W_ID_INVALID
};

class CWEBCLNT_ERR : public CBaseErr
{
public:
    CWEBCLNT_ERR(WEBERROR Err)
    {
        m_Error = Err;
        m_szTextDetail = NULL;
        m_SystemErr = 0;
    }
};
```



```

        m_szErrorText = NULL;
    };
    CWEBCLNT_ERR(WEBERROR Err, char
*szTextDetail, DWORD dwSystemErr)
    {
        m_Error = Err;
        m_szTextDetail = new
char[strlen(szTextDetail)+1];
strcpy( m_szTextDetail,
szTextDetail );
        m_SystemErr =
dwSystemErr;
        m_szErrorText = NULL;
    };
~CWEBCLNT_ERR()
{
    if (m_szTextDetail !=
NULL)
        delete []
m_szTextDetail;
    if (m_szErrorText !=
NULL)
        delete []
m_szErrorText;
};
WEBERROR m_Error;
char
*m_szTextDetail; //
char
*m_szErrorText;
DWORD
m_SystemErr;
int ErrorType() {return
ERR_TYPE_WEBDDL;};
char *ErrorTypeStr() { return
"WEBCLIENT"; }
int ErrorNum() {return m_Error;};
char *ErrorText();
};

//These constants have already been defined in
engstut.h, but since we do
//not want to include it in the delisrv executable
#define TXN_EVENT_START 2
#define TXN_EVENT_STOP 4
#define TXN_EVENT_WARNING 6
//used to record a warning into the log

//function prototypes
BOOL APIENTRY DllMain(HANDLE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved);
void WriteMessageToEventLog(LPCTSTR lpszMsg);
void ProcessQueryString(EXTENSION_CONTROL_BLOCK *pECB,
int *pCmd, int *pFormId, int *pTermId, int *pSyncId);
void WelcomeForm(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer);
void SubmitCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer);
void BeginCmd(EXTENSION_CONTROL_BLOCK *pECB, int
iFormId, int iTermId);
void ProcessCmd(EXTENSION_CONTROL_BLOCK *pECB, int
iFormId, int iTermId);
void StatsCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer);
void ErrorMessage(EXTENSION_CONTROL_BLOCK *pECB, int
iError, int iErrorType, char *szMsg, int iTermId);
void GetKeyValue(char **pQueryString, char *pKey, char
*pValue, int iMax, WEBERROR err);

```

```

int GetIntKeyValue(char **pQueryString, char *pKey,
WEBERROR NoKeyErr, WEBERROR NotIntErr);
void TermInit(void);
void TermDeleteAll(void);
int TermAdd(void);
void TermDelete(int id);
void ErrorForm(EXTENSION_CONTROL_BLOCK *pECB, int
iType, int iErrorNum, int iTermId, int iSyncId, char
*szErrorText, char *
szBuffer );
void MakeMainMenuForm(int iTermId, int iSyncId, char
*szForm);
void MakeStockLevelForm(int iTermId, STOCK_LEVEL_DATA
*pStockLevelData, BOOL bInput, char *szForm);
void MakeNewOrderForm(int iTermId, NEW_ORDER_DATA
*pNewOrderData, BOOL bInput, char *szForm);
void MakePaymentForm(int iTermId, PAYMENT_DATA
*pPaymentData, BOOL bInput, char *szForm);
void MakeOrderStatusForm(int iTermId, ORDER_STATUS_DATA
*pOrderStatusData, BOOL bInput, char *szForm);
void MakeDeliveryForm(int iTermId, DELIVERY_DATA
*pDeliveryData, BOOL bInput, char *szForm);
void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer);
void ProcessPaymentForm(EXTENSION_CONTROL_BLOCK *pECB,
int iTermId, char *szBuffer);
void ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer);
void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK *pECB,
int iTermId, char *szBuffer);
void ProcessStockLevelForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer);
void GetNewOrderData(LPSTR lpszQueryString,
NEW_ORDER_DATA *pNewOrderData);
void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA
*pPaymentData);
void GetOrderStatusData(LPSTR lpszQueryString,
ORDER_STATUS_DATA *pOrderStatusData);
BOOL PostDeliveryInfo(long w_id, short o_carrier_id);
BOOL IsNumeric(char *ptr);
BOOL IsDecimal(char *ptr);
void DeliveryWorkerThread(void *ptr);

```

isapi_dll/src/tpcc.rc

```

//Microsoft Developer Studio generated resource script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "afxres.h"

////////////////////////////////////
////////////////////////////////////
#undef APSTUDIO_READONLY_SYMBOLS

////////////////////////////////////
////////////////////////////////////
// English (U.S.) resources
#if !defined(AFX_RESOURCE_DLL) || defined(AFX_TARG_ENU)

```

```

#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif // _WIN32

#ifdef _MAC
////////////////////////////////////
////////////////////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
FILEVERSION 0,4,0,0
PRODUCTVERSION 0,4,0,0
FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
FILEFLAGS 0x1L
#else
FILEFLAGS 0x0L
#endif
FILEOS 0x40004L
FILETYPE 0x2L
FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904b0"
        BEGIN
            VALUE "Comments", "TPC-C HTML DLL Server
(DBLIB)\0"
            VALUE "CompanyName", "Microsoft\0"
            VALUE "FileDescription", "TPC-C HTML DLL
Server (DBLIB)\0"
            VALUE "FileVersion", "0, 4, 0, 0\0"
            VALUE "InternalName", "tpcc\0"
            VALUE "LegalCopyright", "Copyright ©
1997\0"
            VALUE "OriginalFilename", "tpcc.dll\0"
            VALUE "ProductName", "Microsoft tpcc\0"
            VALUE "ProductVersion", "0, 4, 0, 0\0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END

#endif // !_MAC

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
////////////////////////////////////
//
// TEXTINCLUDE
//
1 TEXTINCLUDE DISCARDABLE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE
BEGIN
    "#include \"afxres.h\"\\r\\n"
    "\0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN

```

```

        "\r\n"
        "\0"
END
#endif // APSTUDIO_INVOKED

////////////////////////////////////
//
// Dialog
//
IDD_DIALOG1 DIALOG DISCARDABLE 0, 0, 186, 95
STYLE DS_MODALFRAME | WS_POPUP | WS_CAPTION |
WS_SYSMENU
CAPTION "Dialog"
FONT 8, "MS Sans Serif"
BEGIN
    DEFPUSHBUTTON   "OK",IDOK,129,7,50,14
    PUSHBUTTON     "Cancel",IDCANCEL,129,24,50,14
END

////////////////////////////////////
//
// DESIGNINFO
//
#ifdef APSTUDIO_INVOKED
GUIDELINES DESIGNINFO DISCARDABLE
BEGIN
    IDD_DIALOG1, DIALOG
    BEGIN
        LEFTMARGIN, 7
        RIGHTMARGIN, 179
        TOPMARGIN, 7
        BOTTOMMARGIN, 88
    END
END
#endif // APSTUDIO_INVOKED

// English (U.S.) resources
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
////////////////////////////////////
//
// not APSTUDIO_INVOKED
#endif

isapi_dll/src/tpcc.cpp

/*      FILE:      TPCC.C
 *      Microsoft TPC-C
 *      Kit Ver. 4.20.000

```

```

 *      Copyright
 *      Microsoft, 1999
 *      All Rights Reserved
 *
 *      Version
 *      4.10.000 audited by Richard Gimarc, Performance
 *      Metrics, 3/17/99
 *
 *      PURPOSE: Main module for TPCC.DLL which is
 *      an ISAPI service dll.
 *      Contact: Charles Levine
 *      (clevine@microsoft.com)
 *
 *      Change history:
 *      4.20.000 - reworked error handling;
 *      added options for COM and Encina txn monitors
 */

#include <windows.h>
#include <process.h>
#include <uchar.h>
#include <stdio.h>
#include <stdarg.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>
#include <assert.h>

#include <sqltypes.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

#include "..\..\common\src\trans.h"
//tpckit transaction header contains
definitions of structures specific to

TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\ReadRegistry.h"

#include "..\..\common\txnlog\include\rtetime.h"
#include "..\..\common\txnlog\include\spinlock.h"
#include "..\..\common\txnlog\include\txnlog.h"

// Database layer includes
#include "..\..\db_dblib_dll\src\tpcc_dblib.h"
// DBLIB implementation of TPC-C txns
#include "..\..\db_odbc_dll\src\tpcc_odbc.h"
// ODBC implementation of TPC-C txns

// Txn monitor layer includes
#include "..\..\tm_com_dll\src\tpcc_com.h"
// COM Services implementation on

TPC-C txns
#include "..\..\tm_tuxedo_dll\src\tpcc_tux.h"
// interface to Tuxedo libraries
#include "..\..\tm_encina_dll\src\tpcc_enc.h"
// interface to Encina libraries

#include "httpext.h"
//ISAPI DLL information header
#include "tpcc.h"
//this dlls specific structure, value e.t.
header.

```

```

#define LEN_ERR_STRING 256

// defines for Make<Txn>Form calls to distinguish input
and output flavors
#define OUTPUT_FORM 0
#define INPUT_FORM 1

char
    szMyComputerName[MAX_COMPUTERNAME_LENGTH+1];

//Terminal client id structure
TERM Term = { 0, 0, 0, NULL };

// The WEBCLIENT_VERSION string specifies the version
level of this web client interface.
// The RTE must be synchronized with the interface
level on login, otherwise the login
// will fail. This is a sanity check to catch problems
resulting from mismatched versions
// of the RTE and web client.
#define WEBCLIENT_VERSION "420"

static CRITICAL_SECTION
    TermCriticalSection;

static HINSTANCE hLibInstanceTm = NULL;
static HINSTANCE hLibInstanceDb = NULL;

TYPE_CTPCC_DBLIB *pCTPCC_DBLIB_new;
TYPE_CTPCC_ODBC *pCTPCC_ODBC_new;
TYPE_CTPCC_TUXEDO *pCTPCC_TUXEDO_new;
TYPE_CTPCC_ENCINA *pCTPCC_ENCINA_new;
TYPE_CTPCC_ENCINA *pCTPCC_ENCINA_post_init;
TYPE_CTPCC_COM *pCTPCC_COM_new;

// For deferred Delivery txns:

CTxnLog
    *txnDelilog = NULL;
//used to log delivery transaction

information

HANDLE hWorkerSemaphore = INVALID_HANDLE_VALUE;
HANDLE hDoneEvent =
INVALID_HANDLE_VALUE;
HANDLE *pDeliHandles = NULL;

// configuration settings from registry
TPCCREGISTRYDATA Reg;

DWORD dwNumDeliveryThreads = 4;
CRITICAL_SECTION DelBuffCriticalSection;
//critical section for delivery

transactions cache
DELIVERY_TRANSACTION *pDelBuff
    = NULL;

DWORD dwDelBuffSize = 100;
// size of circular buffer for delivery txns

DWORD dwDelBuffFreeCount;
// number of buffers free

DWORD dwDelBuffBusyIndex = 0;
//
index position of entry waiting to be

```



```

strcpy( szDllName, Reg.szPath );
strcat( szDllName, "tpcc_odbc.dll");
hLibInstanceDb = LoadLibrary( szDllName );
if (hLibInstanceDb == NULL)
    throw new CWBCLNT_ERR(
ERR_LOADDLL_FAILED, szDllName, GetLastError()
);

// get function pointer to wrapper for class
constructor
    pCTPCC_ODBC_new = (TYPE_CTPCC_ODBC*)
GetProcAddress(hLibInstanceDb, "
CTPCC_ODBC_new");
    if (pCTPCC_ODBC_new == NULL)
        throw new CWBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
    }
(dwNumDeliveryThreads)
    {
Initialize delivery delay critical section
InitializeCriticalSection(&hConnectCriticalSection);
for deferred delivery txns:
    hDoneEvent = CreateEvent( NULL, TRUE /*
manual reset */, FALSE /* initially not
signalled */, NULL );
    InitializeCriticalSection(&DelBuffCriticalSection);
    hWorkerSemaphore = CreateSemaphore( NULL, 0,
dwDelBuffSize, NULL );
    dwDelBuffFreeCount = dwDelBuffSize;
    InitJulianTime(NULL);
//
create unique log file name based on delilog-yyymmdd-
hhmm.log
    SYSTEMTIME Time;
    GetLocalTime( &Time );

```

```

    wsprintf( szLogFile, "%sdelivery-
%2.2d%2.2d%2.2d-%2.2d%2.2d-%2.2ds%2.2dms.log",
    Reg.szPath, Time.wYear % 100, Time.wMonth,
Time.wDay, Time.wHour, Time.
wMinute, Time.wSecond, Time.wMilliseconds );
    txnDelilog = new CTxnLog(szLogFile,
TXN_LOG_WRITE);

//write event into txn log for START
    txnDelilog-
>WriteCtrlRecToLog(TXN_EVENT_START, szMyComputerName,
sizeof(
szMyComputerName));

//
allocate structures for delivery buffers and thread
mgmt
    pDeliHandles = new
HANDLE[dwNumDeliveryThreads];
    pDelBuff = new
DELIVERY_TRANSACTION[dwDelBuffSize];
//
launch DeliveryWorkerThread to perform actual delivery
txns
    for(i=0; i<dwNumDeliveryThreads; i++)
    {
        pDeliHandles[i] = (HANDLE) _beginthread(
DeliveryWorkerThread, 0, NULL );
        if (pDeliHandles[i] == INVALID_HANDLE_VALUE)
            throw new CWBCLNT_ERR(
ERR_DELIVERY_THREAD_FAILED );
    }
    break;
    case DLL_PROCESS_DETACH:
    if
(dwNumDeliveryThreads)
    {
        if
(txnDelilog != NULL)
        {
//write event into txn log for STOP
            txnDelilog->WriteCtrlRecToLog(TXN_EVENT_STOP,
szMyComputerName, sizeof(
szMyComputerName));

// This will do a clean shutdown of the
delivery log file
            CTxnLog *txnDelilogLocal = txnDelilog;
            txnDelilog= NULL;

```

```

delete txnDelilogLocal;
}

delete [] pDeliHandles;
delete [] pDelBuff;

CloseHandle( hWorkerSemaphore );
CloseHandle( hDoneEvent );
DeleteCriticalSection(&DelBuffCriticalSection
);
Delete delivery delay critical section
DeleteCriticalSection(&hConnectCriticalSection);
DeleteCriticalSection(&TermCriticalSection);
if
(hLibInstanceTm != NULL)
    FreeLibrary( hLibInstanceTm );
hLibInstanceTm
= NULL;
if
(hLibInstanceDb != NULL)
    FreeLibrary( hLibInstanceDb );
hLibInstanceDb
= NULL;
Sleep(500);
break;
default:
/* nothing */;
}
}
catch (CBaseErr *e)
{
    TCHAR szMsg[256];
    _sntprintf(szMsg, sizeof(szMsg),
"%s error, code %d: %s",
e-
>ErrorTypeStr(), e->ErrorNum(), e->ErrorText());
    WriteMessageToEventLog( szMsg );
    delete e;
    TerminateExtension(0);
    return FALSE;
}
catch (...)
{
    WriteMessageToEventLog(TEXT("Unhandled
exception. DLL could not load.));
    TerminateExtension(0);
    return FALSE;
}
return TRUE;

```

```

}

/* FUNCTION: GetExtensionVersion
 * PURPOSE: This function is called by the inet
 * service when the DLL is first loaded.
 * ARGUMENTS: HSE_VERSION_INFO *pVer
 * passed in structure in which to place
 * expected version number.
 * RETURNS: TRUE inet service
 * expected return value.
 */

BOOL WINAPI GetExtensionVersion(HSE_VERSION_INFO *pVer)
{
    pVer->dwExtensionVersion =
    MAKELONG(HSE_VERSION_MINOR, HSE_VERSION_MAJOR);
    lstrcpy(pVer->lpszExtensionDesc, "TPC-C
    Server.", HSE_MAX_EXT_DLL_NAME_LEN);

    // TODO: why do we need this here instead of
    in the DLL attach?
    if (Reg.eTxnMon == ENCINA)
        pCTPCC_ENCINA_post_init();

    return TRUE;
}

/* FUNCTION: TerminateExtension
 * PURPOSE: This function is called by the inet
 * service when the DLL is about to be unloaded.
 * Release all resources in
 * anticipation of being unloaded.
 * RETURNS: TRUE inet service
 * expected return value.
 */

BOOL WINAPI TerminateExtension( DWORD dwFlags )
{
    if (pDeliHandles)
    {
        SetEvent( hDoneEvent );
        for(DWORD i=0;
        i<dwNumDeliveryThreads; i++)
            WaitForSingleObject(
            pDeliHandles[i], INFINITE );
    }

    TermDeleteAll();
    return TRUE;
}

/* FUNCTION: HttpExtensionProc
 * PURPOSE: This function is the main entry
 * point for the TPCC DLL. The internet service
 * calls this function
 * passing in the http string.
 * ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
 * structure pointer to passed in internet
 * service information.

```

```

 * RETURNS: DWORD
 * HSE_STATUS_SUCCESS
 * connection can be dropped if error
 * HSE_STATUS_SUCCESS_AND_KEEP_CONN keep
 * connect valid comment sent
 * COMMENTS: None
 */

DWORD WINAPI HttpExtensionProc(EXTENSION_CONTROL_BLOCK
 *pECB)
{
    int iCmd, FormId,
    TermId, iSyncId;
    char szBuffer[4096];

    int lpbSize;
    static char szHeader[] = "200 Ok";
    DWORD dwSize = 6;
    // initial value is strlen(szHeader)
    char szHeader1[4096];

#ifdef ICECAP
    StartCAP();
#endif

    try
    {
        //process http query
        ProcessQueryString(pECB, &iCmd,
        &FormId, &TermId, &iSyncId);

        if (TermId != 0)
        {
            if ( TermId < 0 || TermId
            >= Term.iNumEntries ||
            Term.pClientData[TermId].iNextFree != -1 )
            {
                // debugging...
                char
                szTmp[128];
                wsprintf(
                szTmp, "Invalid term ID; TermId = %d", TermId );
                WriteMessageToEventLog( szTmp );
                throw new
                CWEBCLNT_ERR( ERR_INVALID_TERMID );
            }

            //must have a valid
            syncid here since termid is valid
            if (iSyncId !=
            Term.pClientData[TermId].iSyncId)
                throw new
                CWEBCLNT_ERR( ERR_INVALID_SYNC_CONNECTION );

            //set use time
            Term.pClientData[TermId].iTickCount =
            GetTickCount();
        }

        switch(iCmd)
        {
            case 0:
                WelcomeForm(pECB,
                szBuffer);

```

```

                break;
            case 1:
                switch( FormId )
                {
                    case
                    WELCOME_FORM:
                    case
                    MAIN_MENU_FORM:
                    break;
                    case
                    NEW_ORDER_FORM:
                        ProcessNewOrderForm(pECB, TermId, szBuffer);
                    break;
                    case
                    PAYMENT_FORM:
                        ProcessPaymentForm(pECB, TermId, szBuffer);
                    break;
                    case
                    DELIVERY_FORM:
                        ProcessDeliveryForm(pECB, TermId, szBuffer);
                    break;
                    case
                    ORDER_STATUS_FORM:
                        ProcessOrderStatusForm(pECB, TermId,
                        szBuffer);
                    break;
                    case
                    STOCK_LEVEL_FORM:
                        ProcessStockLevelForm(pECB, TermId,
                        szBuffer);
                    break;
                }
            case 2:
                // new-order selected
                from menu; display new-order input form
                MakeNewOrderForm(TermId,
                NULL, INPUT_FORM, szBuffer);
                break;
            case 3:
                // payment selected from
                menu; display payment input form
                MakePaymentForm(TermId,
                NULL, INPUT_FORM, szBuffer);
                break;
            case 4:
                // delivery selected from
                menu; display delivery input
                form
                MakeDeliveryForm(TermId,
                NULL, INPUT_FORM, szBuffer);
                break;
            case 5:
                // order-status selected
                from menu; display order-status input form
                MakeOrderStatusForm(TermId, NULL, INPUT_FORM,
                szBuffer);
                break;
            case 6:
                // stock-level selected
                from menu; display stock-level input form

```

```

        MakeStockLevelForm(TermId, NULL, INPUT_FORM,
szBuffer);
        case 7:
            break;
            // ExitCmd
            TermDelete(TermId);
            WelcomeForm(pECB,
szBuffer);
        case 8:
            break;
            SubmitCmd(pECB,
szBuffer);
        case 9:
            // menu
            MakeMainMenuForm(TermId,
Term.pClientData[TermId].iSyncId, szBuffer);
            break;
        case 10:
            // CMD=Clear
            // resets all
            connections: should only be used when no other
            connections are active
            TermDeleteAll();
            TermInit();
            WelcomeForm(pECB,
szBuffer);
            break;
        case 11:
            // CMD=Stats
            StatsCmd(pECB, szBuffer);
            break;
    }
    catch (CBaseErr *e)
    {
        ErrorForm( pECB, e->ErrorType(), e-
>ErrorNum(), TermId, iSyncId, e->ErrorText(), szBuffer
);
        delete e;
    }
    catch (...)
    {
        ErrorForm( pECB, ERR_TYPE_WEBDLL,
0, TermId, iSyncId, "Error: Unhandled exception in Web
Client.", szBuffer
);
    }
}
#endif ICECAP
StopCAP();
#endif

    lpbSize = strlen(szBuffer);
    wsprintf(szHeader1,
"Content-Type:
text/html\r\n"
"Content-Length: %d\r\n"
"Connection: Keep-
Alive\r\n\r\n", lpbSize);
    strcat( szHeader1, szBuffer );

    (*pECB->ServerSupportFunction)(pECB->ConnID,
HSE_REQ_SEND_RESPONSE_HEADER, szHeader, (LPDWORD)
&dwSize, (LPDWORD)
szHeader1);

    //finish up and keep connection
pECB->dwHttpStatusCode = 200;

```

```

        return HSE_STATUS_SUCCESS_AND_KEEP_CONN;
    }

void WriteMessageToEventLog(LPTSTR lpszMsg)
{
    TCHAR    szMsg[256];
    HANDLE   hEventSource;
    LPTSTR   lpszStrings[2];

    // Use event logging to log the error.
    //
    hEventSource = RegisterEventSource(NULL,
TEXT("TPCC.DLL"));

    _stprintf(szMsg, TEXT("Error in TPCC.DLL: "));
    lpszStrings[0] = szMsg;
    lpszStrings[1] = lpszMsg;

    if (hEventSource != NULL)
    {
        ReportEvent(hEventSource, // handle of event
source
        EVENTLOG_ERROR_TYPE, // event type
        0, // event category
        0, // event ID
        NULL, // current user's SID
        2, // strings in
lpszStrings
        0, // no bytes of raw
data
        (LPCTSTR *)lpszStrings, // array of
error strings
        NULL); // no raw data

        (VOID) DeregisterEventSource(hEventSource);
    }
}

/* FUNCTION: DeliveryWorkerThread
*
* PURPOSE: This function processes deferred
delivery txns. There are typically several
threads running this
routine. The number of threads is determined by an
entry
read from the registry.
The thread waits for work by waiting on semaphore.
*
* When a delivery txn is
posted, the semaphore is released. After processing
the delivery txn,
information is logged to record the txn status and
execution
time.
*/

/*static*/ void DeliveryWorkerThread(void *ptr)
{
    CTPCC_BASE *pTxn = NULL;

    DELIVERY_TRANSACTION
delivery;
    PDELIVERY_DATA
pDeliveryData;
    TXN_RECORD_TPCC_DELIV_DEF txnDeliRec;

    DWORD
index;
    HANDLE
handles[2];

```

```

        SYSTEMTIME trans_end;
time //delivery transaction finished
        SYSTEMTIME trans_start;
//delivery transaction start time
        assert(txnDeliLog != NULL);

        try
        {
            if (Reg.eDB_Protocol == ODBC)
            {
                if (Reg.dwConnectDelay >
0)
                {
                    // Synchronize
connect (for VIA)
                    //
                    EnterCriticalSection(&hConnectCriticalSection
);
                    Sleep(Reg.dwConnectDelay);
                }
                pTxn = pCTPCC_ODBC_new(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
szMyComputerName, Reg.szDbName,
Reg.szSPPrefix,
Reg.bCallNoDuplicatesNewOrder );
                if (Reg.dwConnectDelay >
0)
                {
                    // Synchronize
connect (for VIA)
                    //
                    LeaveCriticalSection(&hConnectCriticalSection
);
                }
            }
            else
            {
                if (Reg.eDB_Protocol ==
DBLIB)
                {
                    pTxn =
pCTPCC_DBLIB_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName,
Reg.szDbName );
                }
                pDeliveryData = pTxn-
>BuffAddr_Delivery();
                catch (CBaseErr *e)
                {
                    char szTmp[1024];
                    wsprintf( szTmp, "Error in Delivery
Txn thread. Could not connect to Database. "
"%s",
Server=%s, User=%s, Password=%s, Database=%s",
e->ErrorText(),
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
Reg.szDbName );
                    WriteMessageToEventLog( szTmp );
                    delete e;
                    goto ErrorExit;
                }
            }
        }
        catch (...)

```

```

    {
        WriteMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread.));
        goto ErrorExit;
    }

    while (TRUE)
    {
        try
        {
            //while delivery thread
            //running, i.e. user has not requested termination
            while (TRUE)
            {
                // need to wait
                // for multiple objects: program exit or worker semaphore;
                handles[0] =
                hDoneEvent;
                handles[1] =
                hWorkerSemaphore;
                index =
                WaitForMultipleObjects( 2, &handles[0], FALSE, INFINITE
);
                if (index ==
                WAIT_OBJECT_0)
                    goto
                ErrorExit;

                ZeroMemory(&txnDeliRec, sizeof(txnDeliRec));

                txnDeliRec.TxnType =
                TXN_REC_TYPE_TPCC_DELIV_DEF;

                // make a local
                // copy of current entry from delivery buffer and
                // increment buffer index

                EnterCriticalSection(&DelBuffCriticalSection)
                ;
                delivery =
                *(pDelBuff+dwDelBuffBusyIndex);
                dwDelBuffFreeCount++;
                dwDelBuffBusyIndex++;
                if
                (dwDelBuffBusyIndex == dwDelBuffSize) // wrap-around
                if at end of buffer
                    dwDelBuffBusyIndex = 0;

                LeaveCriticalSection(&DelBuffCriticalSection)
                ;

                pDeliveryData-
                >w_id = delivery.w_id;
                pDeliveryData-
                >o_carrier_id = delivery.o_carrier_id;

                txnDeliRec.w_id
                = pDeliveryData->w_id;

                txnDeliRec.o_carrier_id = pDeliveryData-
                >o_carrier_id;

                txnDeliRec.TxnStartT0 =
                Get64BitTime(&delivery.queue);
            }
        }
    }

```

```

        GetLocalTime(
        &trans_start );
        pTxn-
        >Delivery();
        GetLocalTime(
        &trans_end );

        //log txn

        txnDeliRec.TxnStatus = ERR_SUCCESS;
        for (int i=0;
        i<10; i++)
            txnDeliRec.o_id[i] = pDeliveryData->o_id[i];

        txnDeliRec.DeltaT4 =
        (int)(Get64BitTime(&trans_end) -
        txnDeliRec.TxnStartT0);

        txnDeliRec.DeltaTxnExec =
        (int)(Get64BitTime(&trans_end) -
        Get64BitTime(&trans_start));

        if (txnDelilog
        != NULL)
            txnDelilog->WriteToLog(&txnDeliRec);
        }
        catch (CBaseErr *e)
        {
            char szTmp[1024];
            wsprintf( szTmp, "%s
Error (code %d) in Delivery Txn thread. %s",
            e-
            >ErrorTypeStr(), e->ErrorNum(), e->ErrorText() );
            WriteMessageToEventLog(
            szTmp );

            // log the error txn
            txnDeliRec.TxnStatus = e-
            >ErrorType();
            if (txnDelilog != NULL)
                txnDelilog-
                >WriteToLog(&txnDeliRec);

            delete e;
        }
        catch (...)
        {
            // unhandled exception;
            // shouldn't happen; not much we can do...

            WriteMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread.));
        }
    }
ErrorExit:
    if (Reg.dwConnectDelay > 0)
    {
        // Synchronize disconnect (for VIA)
        //

        EnterCriticalSection(&hConnectCriticalSection)
        ;

        Sleep(Reg.dwConnectDelay);
    }

    delete pTxn;

```

```

    if (Reg.dwConnectDelay > 0)
    {
        // Synchronize disconnect (for VIA)
        //

        LeaveCriticalSection(&hConnectCriticalSection)
        ;
    }

    _endthread();
}

/* FUNCTION: PostDeliveryInfo
*
* PURPOSE: This function enters the delivery
* txn into the deferred delivery buffer.
*
* RETURNS: BOOL FALSE
*          delivery information posted successfully
*          TRUE error cannot post delivery info
*/
BOOL PostDeliveryInfo(long w_id, short o_carrier_id)
{
    BOOL bError;

    EnterCriticalSection(&DelBuffCriticalSection)
    ;
    if (dwDelBuffFreeCount > 0)
    {
        bError = FALSE;
        (pDelBuff+dwDelBuffFreeIndex)->w_id
        = w_id;
        (pDelBuff+dwDelBuffFreeIndex)-
        >o_carrier_id
        = o_carrier_id;

        GetLocalTime(&(pDelBuff+dwDelBuffFreeIndex)-
        >queue);

        dwDelBuffFreeCount--;
        dwDelBuffFreeIndex++;
        if (dwDelBuffFreeIndex ==
        dwDelBuffSize)
            // wrap-around if at end of buffer
        }
    }
    else
        // No free buffers. Return an
        // error, which indicates that the delivery buffer is
        // full.
        // Most likely, the number of
        // delivery worker threads needs to be increased to keep
        // up
        // with the txn rate.
        bError = TRUE;
    LeaveCriticalSection(&DelBuffCriticalSection)
    ;

    if (!bError)
        // increment worker semaphore to
        // wake up a worker thread
        ReleaseSemaphore( hWorkerSemaphore,
        1, NULL );

    return bError;
}

/* FUNCTION: ProcessQueryString
*
* PURPOSE: This function extracts the relevant
* information out of the http command passed in from

```

```

*           the browser.
*
* COMMENTS:   If this is the initial connection
i.e. client is at welcome screen then
*           there will not
be a terminal id or current form id. If this is the
case
*           then the
pTermid and pFormid return values are undefined.
*/

void ProcessQueryString(EXTENSION_CONTROL_BLOCK *pECB,
int *pCmd, int *pFormId, int *pTermId, int *pSyncId)
{
    char *ptr = pECB->lpszQueryString;
    char szBuffer[25];
    int i;

    //allowable client command strings i.e.
CMD=command
static char *szCmds[] =
{
    "Process", "..NewOrder..",
"..Payment..", "..Delivery..", "..Order-Status..",
"..Stock-Level..",
"..Exit..", "Submit", "Menu",
"Clear", "Stats", ""
};

    *pCmd = 0; // default is
the login screen
    *pTermId = 0;

    // if no params (i.e., empty query string),
then return login screen
    if (strlen(pECB->lpszQueryString) == 0)
        return;

    // parse FORMID, TERMID, and SYNCID
    *pFormId = GetIntKeyValue(&ptr, "FORMID",
NO_ERR, NO_ERR);
    *pTermId = GetIntKeyValue(&ptr, "TERMID",
NO_ERR, NO_ERR);
    *pSyncId = GetIntKeyValue(&ptr, "SYNCID",
NO_ERR, NO_ERR);

    // parse CMD
    GetKeyValue(&ptr, "CMD", szBuffer,
sizeof(szBuffer), ERR_COMMAND_UNDEFINED);

    // see which command it matches
    for(i=0; i++)
    {
        if (szCmds[i][0] == 0)
            // no more; no match;
return error
ERR_COMMAND_UNDEFINED );
        if ( !strcmp(szCmds[i], szBuffer) )
        {
            *pCmd = i+1;
            break;
        }
    }

    /* FUNCTION: void WelcomeForm
    *
    */

void WelcomeForm(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)

```

```

{
    char szTmp[1024];

    //welcome to tpc-c html form buffer, this is
first form client sees.
    strcpy( szBuffer, "<HTML><HEAD><TITLE>TPC-C
Web Client</TITLE></HEAD><BODY>"

    "<B><BIG>Microsoft TPC-C Web Client (ver
4.20)</BIG></B> <BR> <BR>"

    "<font face=\"Courier New\"><PRE>"
    "Compiled:  __DATE__ ,  __TIME__  <BR>"
    "Source:  __FILE__  (  __TIMESTAMP__  ) <BR>"
    "</PRE></font>"

    "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\""
VALUE=\"0\""
    "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\"
VALUE=\"0\""
    "<INPUT TYPE=\"hidden\" NAME=\"FORMID\"
VALUE=\"1\""
    "<INPUT TYPE=\"hidden\" NAME=\"TERMID\"
VALUE=\"0\""
    "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\"
VALUE=\"0\""
    "<INPUT TYPE=\"hidden\" NAME=\"VERSION\"
VALUE=\" WEBCLIENT_VERSION \"\";"

    sprintf( szTmp, "Configuration Settings:
<BR><font face=\"Courier New\" color=\"blue\"><PRE>"
Monitor
    = <B>%s</B><BR>"
    "Txn
    "Database protocol
    = <B>%s</B><BR>"
    "Max
Connections
    = <B>%d</B><BR>"
    "# of
Delivery Threads
    = <B>%d</B><BR>"
    "Max
Pending Deliveries
    = <B>%d</B><BR>"

    szTxnMonNames[Reg.eTxnMon],
szDBNames[Reg.eDB_Protocol],
    Reg.dwMaxConnections,
dwNumDeliveryThreads, dwDelBuffSize );
    strcat( szBuffer, szTmp);

    if (Reg.eTxnMon == COM)
    {
        sprintf( szTmp, "COM Single
Pool
    = <B>%s</B><BR>",
    Reg.bCOM_SinglePool ?
"YES" : "NO" );
        strcat( szBuffer, szTmp);
    }
    strcat( szBuffer, "</PRE></font>");

    if (Reg.eTxnMon == None)
        // connection options may be
specified when not using a txn monitor

```

```

        sprintf( szTmp, "Please enter
your database options for this connection:<BR>"

    "<font face=\"Courier New\"
color=\"blue\"><PRE>"

    "DB Server
    = <INPUT NAME=\"db_server\"
SIZE=20 VALUE=\"%s\"><BR>"

    "DB User ID
    = <INPUT NAME=\"db_user\"
SIZE=20 VALUE=\"%s\"><BR>"

    "DB Password
    = <INPUT NAME=\"db_passwd\"
SIZE=20 VALUE=\"%s\"><BR>"

    "DB Name
    = <INPUT NAME=\"db_name\"
SIZE=20 VALUE=\"%s\"><BR>"

    "</PRE></font>"

    Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
Reg.szDbName );
    else
        // if using a txn monitor,
connection options are determined from registry; can't
// set per user. show options fyi
        sprintf( szTmp, "Database
options which will be used by the transaction
monitor:<BR>"

    "<font face=\"Courier New\"
color=\"blue\"><PRE>"

    "DB Server
    = <B>%s</B><BR>"
    "DB User ID
    = <B>%s</B><BR>"
    "DB Password
    = <B>%s</B><BR>"
    "DB Name
    = <B>%s</B><BR>"

    "</PRE></font>"

    Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
Reg.szDbName );
    strcat( szBuffer, szTmp);

    sprintf( szTmp, "Please enter your
Warehouse and District for this session:<BR>"

    "<font face=\"Courier New\"
color=\"blue\"><PRE>" );
    strcat( szBuffer, szTmp);
    strcat( szBuffer, "Warehouse ID = <INPUT
NAME=\"w_id\" SIZE=6><BR>"

    "District ID
    = <INPUT NAME=\"d_id\"
SIZE=2><BR>"

    "</PRE></font><HR>"

    "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Submit\""

    "</FORM></BODY></HTML>");
}

/* FUNCTION: SubmitCmd
*
* PURPOSE:   This function allocated a new
terminal id in the Term structure array.
*

```



```

*/
void SubmitCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
    int          iNewTerm;
    char         *ptr = pECB->lpszQueryString;

    char         szVersion[32]   = { 0 };
    char         szServer[32]    = { 0 };
    char         szUser[32]      =
"sa";
    char         szPassword[32]  = { 0 };
    char         szDatabase[32]  = "tpcc";

    // validate version field; the version field
ensures that the RTE is synchronized with the web
client
    GetKeyValue(&ptr, "VERSION", szVersion,
sizeof(szVersion), ERR_VERSION_MISMATCH);
    if ( strcmp( szVersion, WEBCLIENT_VERSION ) )
        throw new CWEBCLNT_ERR(
ERR_VERSION_MISMATCH );

    if (Reg.eTxnMon == None)
    {
        // parse Server name
        GetKeyValue(&ptr, "db_server",
szServer, sizeof(szServer), ERR_NO_SERVER_SPECIFIED);
        // parse User name
        GetKeyValue(&ptr, "db_user",
szUser, sizeof(szUser), NO_ERR);
        // parse Password
        GetKeyValue(&ptr, "db_passwd",
szPassword, sizeof(szPassword), NO_ERR);
        // parse Database name
        GetKeyValue(&ptr, "db_name",
szDatabase, sizeof(szDatabase), NO_ERR);
    }

    // parse warehouse ID
    int w_id = GetIntKeyValue(&ptr, "w_id",
ERR_HTML_ILL_FORMED, ERR_W_ID_INVALID);
    if ( w_id < 1 )
        throw new CWEBCLNT_ERR(
ERR_W_ID_INVALID );

    // parse district ID
    int d_id = GetIntKeyValue(&ptr, "d_id",
ERR_HTML_ILL_FORMED, ERR_D_ID_INVALID);
    if ( d_id < 1 || d_id > 10 )
        throw new CWEBCLNT_ERR(
ERR_D_ID_INVALID );

    iNewTerm = TermAdd();

    Term.pClientData[iNewTerm].w_id = w_id;
    Term.pClientData[iNewTerm].d_id = d_id;

    try
    {
        if (Reg.eTxnMon == TUXEDO)
            Term.pClientData[iNewTerm].pTxn =
pCTPCC_TUXEDO_new();
        else if (Reg.eTxnMon == ENCINA)
            Term.pClientData[iNewTerm].pTxn =
pCTPCC_ENCINA_new();
        else if (Reg.eTxnMon == COM)

```

```

            Term.pClientData[iNewTerm].pTxn =
pCTPCC_COM_new( Reg.bCOM_SinglePool );
        else if (Reg.eDB_Protocol == ODBC)
            Term.pClientData[iNewTerm].pTxn =
pCTPCC_ODBC_new( szServer, szUser, szPassword,
szMyComputerName,

szDatabase, Reg.szSPPrefix,

Reg.bCallNoDuplicatesNewOrder );
        else if (Reg.eDB_Protocol == DBLIB)
            Term.pClientData[iNewTerm].pTxn =
pCTPCC_DBLIB_new( szServer, szUser, szPassword,
szMyComputerName,

szDatabase );
    }
    catch (...)
    {
        TermDelete(iNewTerm);
        throw; // pass
exception upward
    }

    MakeMainMenuForm(iNewTerm,
Term.pClientData[iNewTerm].iSyncId, szBuffer);

/* FUNCTION: StatsCmd
*
* PURPOSE: This function returns to the
browser the total number of active terminal ids.
This routine is for
development/debugging purposes.
*/

void StatsCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
    int i;
    int iTotals;

    EnterCriticalSection(&TermCriticalSection);

    iTotals = 0;
    for(i=0; i<Term.iNumEntries; i++)
    {
        if (Term.pClientData[i].iNextFree
== -1)
            iTotals++;
    }
    LeaveCriticalSection(&TermCriticalSection);

    wsprintf( szBuffer,
"<HTML><HEAD><TITLE>TPC-C
Web Client Stats</TITLE></HEAD>"
"<BODY><B><BIG> Total
Active Connections: %d </BIG></BODY></HTML>"

```

```

, iTotals );
}
char *CWEBCLNT_ERR::ErrorText()
{
    static SERRORMSG errorMsgs[] =
    {
        { ERR_COMMAND_UNDEFINED,
"Command undefined."

},
        { ERR_D_ID_INVALID,
"Invalid District ID Must be 1 to 10
."

},
        { ERR_DELIVERY_CARRIER_ID_RANGE,
"Delivery Carrier ID out of range
must be 1 - 10."

},
        { ERR_DELIVERY_CARRIER_INVALID,
"Delivery Carrier ID invalid must be numeric
1 - 10."

},
        { ERR_DELIVERY_MISSING_OCD_KEY,
"Delivery missing Carrier ID key \"OCD*\"."

},
        { ERR_DELIVERY_THREAD_FAILED,
"Could not start delivery worker
thread."

},
        { ERR_GETPROCADDR_FAILED,
"Could not map proc in DLL. GetProcAddr
error. DLL="

},
        { ERR_HTML_ILL_FORMED,
"Required key field is missing from HTML
string."

},
        { ERR_INVALID_SYNC_CONNECTION,
"Invalid Terminal Sync ID."

},
        { ERR_INVALID_TERMID,
"Invalid Terminal ID."

},
        { ERR_LOADDLL_FAILED,
"Load

```

```

of DLL failed. DLL="
    {
    ERR_MAX_CONNECTIONS_EXCEEDED,
    "No connections available. Max Connections
is
probably too low." },
    {
    ERR_MISSING_REGISTRY_ENTRIES,
    "Required registry entries are missing.
Rerun
INSTALL to correct." },
    {
    ERR_NEWORDER_CUSTOMER_INVALID,
    "New Order customer id invalid data
type, range = 1
to 3000." },
    {
    ERR_NEWORDER_CUSTOMER_KEY,
    "New Order missing Customer key
\"CID*\"." },
    {
    ERR_NEWORDER_DISTRICT_INVALID,
    "New Order District ID Invalid
range 1 - 10." },
    {
    ERR_NEWORDER_FORM_MISSING_DID,
    "New Order missing District key
\"DID*\"." },
    {
    ERR_NEWORDER_ITEMID_INVALID,
    "New Order Item Id is wrong data type, must
be
numeric." },
    {
    ERR_NEWORDER_ITEMID_RANGE,
    "New Order Item Id is out of range.
Range = 1
to 999999." },
    {
    ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
    "New Order Item_Id entered without a
corresponding Supp_W;" },
    {
    ERR_NEWORDER_MISSING_IID_KEY,
    "New Order missing Item Id key \"IID*\"." },
    {
    ERR_NEWORDER_MISSING_QTY_KEY,
    "New Order Missing Qty key \"Qty##*\"." },
    {
    ERR_NEWORDER_MISSING_SUPPW_KEY,

```

```

    "New Order missing Supp_W key
\"SP##*\"." },
    {
    ERR_NEWORDER_NOITEMS_ENTERED,
    "New Order No order lines entered." },
    {
    ERR_NEWORDER_QTY_INVALID,
    "New Order Qty
invalid must be numeric range
1 - 99." },
    {
    ERR_NEWORDER_QTY_RANGE,
    "New
Order Qty is out of range. Range = 1 to
99." },
    {
    ERR_NEWORDER_QTY_WITHOUT_SUPPW,
    "New Order Qty field entered
without a corresponding
Supp_W." },
    {
    ERR_NEWORDER_SUPPW_INVALID,
    "New Order Supp_W invalid data type
must be
numeric." },
    {
    ERR_NO_SERVER_SPECIFIED,
    "No Server name
specified." },
    {
    ERR_ORDERSTATUS_CID_AND_CLT,
    "Order Status Only Customer ID or Last Name
may be
entered, not both." },
    {
    ERR_ORDERSTATUS_CID_INVALID,
    "Order Status Customer ID invalid, range must
be
numeric 1 - 3000." },
    {
    ERR_ORDERSTATUS_CLT_RANGE,
    "Order Status Customer last name
longer than
16 characters." },
    {
    ERR_ORDERSTATUS_DID_INVALID,
    "Order Status District invalid, value must be
numeric
1 - 10." },
    {
    ERR_ORDERSTATUS_MISSING_CID_CLT,
    "Order Status Either Customer ID or Last Name
must be
entered." },
    {
    ERR_ORDERSTATUS_MISSING_CID_KEY,
    "Order Status missing Customer key \"CID*\"."

```

```

    },
    {
    ERR_ORDERSTATUS_MISSING_CLT_KEY,
    "Order Status missing Customer Last Name key
\"CLT*\"
." },
    {
    ERR_ORDERSTATUS_MISSING_DID_KEY,
    "Order Status missing District key \"DID*\"." },
    {
    ERR_PAYMENT_CDI_INVALID,
    "Payment
Customer district invalid must be
numeric." },
    {
    ERR_PAYMENT_CID_AND_CLT,
    "Payment Only
Customer ID or Last Name may be
entered, not both." },
    {
    ERR_PAYMENT_CUSTOMER_INVALID,
    "Payment Customer data type invalid, must be
numeric
." },
    {
    ERR_PAYMENT_CWI_INVALID,
    "Payment
Customer Warehouse invalid, must be
numeric." },
    {
    ERR_PAYMENT_DISTRICT_INVALID,
    "Payment District ID is invalid, must be 1 -
10." },
    {
    ERR_PAYMENT_HAM_INVALID,
    "Payment Amount
invalid data type must be
numeric." },
    {
    ERR_PAYMENT_HAM_RANGE,
    "Payment Amount out of range, 0 - 9999.99."
    },
    {
    ERR_PAYMENT_LAST_NAME_TO_LONG,
    "Payment Customer last name longer
than 16
characters." },
    {
    ERR_PAYMENT_MISSING_CDI_KEY,
    "Payment missing Customer district key
\"CDI*\"." },
    {
    ERR_PAYMENT_MISSING_CID_CLT,
    "Payment Either Customer ID or Last Name must
be
entered." },

```

```

        {
ERR_PAYMENT_MISSING_CID_KEY,
"Payment missing Customer Key \"CID*\"."
        },
        {
ERR_PAYMENT_MISSING_CLT_KEY,
"Payment missing Customer Last Name key
\"CLT*\"."
        },
        {
ERR_PAYMENT_MISSING_CWI_KEY,
"Payment missing Customer Warehouse key
\"CWI*\"."
        },
        {
ERR_PAYMENT_MISSING_DID_KEY,
"Payment missing District Key \"DID*\"."
        },
        {
ERR_PAYMENT_MISSING_HAM_KEY,
"Payment missing Amount key \"HAM*\"."
        },
        {
ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
"Stock Level; missing Threshold key \"TT*\"."
        },
        {
ERR_STOCKLEVEL_THRESHOLD_INVALID,
"Stock Level; Threshold value must be in the
range =
1 - 99."
        },
        {
ERR_STOCKLEVEL_THRESHOLD_RANGE,
"Stock Level Threshold out of
range, range must be 1
- 99."
        },
        {
ERR_VERSION_MISMATCH,
"Invalid version field. RTE and Web Client
are probably out of sync."
        },
        {
ERR_W_ID_INVALID,
"Invalid Warehouse ID."
        },
        {
0,
""
        },
};
char szTmp[256];
int i = 0;

```

```

while (TRUE)
{
    if (errorMsgs[i].szMsg[0] == 0)
    {
        strcpy( szTmp, "Unknown
error number." );
        break;
    }
    if (m_Error == errorMsgs[i].iError)
    {
        strcpy( szTmp,
errorMsgs[i].szMsg );
        break;
    }
    i++;
}

if (m_szTextDetail)
    strcat( szTmp, m_szTextDetail );
if (m_SystemErr)
    wsprintf( szTmp+strlen(szTmp), "
Error=%d", m_SystemErr );

m_szErrorText = new char[strlen(szTmp)+1];
strcpy( m_szErrorText, szTmp );
return m_szErrorText;
}

/* FUNCTION: GetKeyValue
*
* PURPOSE: This function parses a http
formatted string for specific key values.
*
* ARGUMENTS: char
*pQueryString http string from client
browser char key
value to look for *pKey char key
*
* *pValue char
character array into which to place key's
value
*
* iMax int
maximum length of key value array.
* WEBERROR error
err error
value to throw
*
* RETURNS: nothing.
*
* ERROR: if (the pKey value is not found)
then if
* (err == 0) if
* return (empty string)
* else
* throw CWBCLNT_ERR(err)
*
* COMMENTS: http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats
TPC-C input
fields in such a manner that the keys can be extracted
in the
above manner.
*/

```

```

void GetKeyValue(char *pQueryString, char *pKey, char
*pValue, int iMax, WEBERROR err)
{
    char *ptr;

    if ( !(ptr=strstr(*pQueryString, pKey)) )
        goto ErrorExit;
    ptr += strlen(pKey);
    if ( *ptr != '=' )
        goto ErrorExit;
    ptr++;

    iMax--; // one position is for terminating
null
while( *ptr && *ptr != '&' && iMax)
{
    *pValue++ = *ptr++;
    iMax--;
}
*pValue = 0; // terminating null
*pQueryString = ptr;
return;

ErrorExit:
if (err != NO_ERR)
    throw new CWBCLNT_ERR( err );
*pValue = 0; // return empty result string
}

/* FUNCTION: GetIntKeyValue
*
* PURPOSE: This function parses a http
formatted string for a specific key value.
*
* ARGUMENTS: char
*pQueryString http string from client
browser char key
value to look for *pKey char key
*
* NoKeyErr WEBERROR
key not found error value to throw if
*
* NotIntErr WEBERROR
value not numeric error value to throw if
*
* RETURNS: integer
*
* ERROR: if (the pKey value is not found)
then if
* (NoKeyErr != NO_ERR) if
* throw CWBCLNT_ERR(err)
* else
* return 0
* else if (non-
numeric char found) then
* if
* (NotIntErr != NO_ERR) then
* throw CWBCLNT_ERR(err)
* else
* return 0
*
* COMMENTS: http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats

```

```

*                               TPC-C input
fields in such a manner that the keys can be extracted
in the                           above manner.
*/

int GetIntKeyValue(char **pQueryString, char *pKey,
WEBERROR NoKeyErr, WEBERROR NotIntErr)
{
    char *ptr0;
    char *ptr;

    if ( !(ptr=strstr(*pQueryString, pKey)) )
        goto ErrorNoKey;
    ptr += strlen(pKey);
    if ( *ptr != '=' )
        goto ErrorNoKey;
    ptr++;

    ptr0 = ptr;           // remember
starting point
    // scan string until a terminator (null or &
or a non-digit
    while( *ptr && *ptr != '&' && isdigit(*ptr) )
        ptr++;

    // make sure we stopped scanning for the
right reason
    if ((ptr0 == ptr) || (*ptr && *ptr != '&'))
    {
        if (NotIntErr != NO_ERR)
            throw new CWBCLNT_ERR(
NoKeyErr );
        return 0;
    }

    *pQueryString = ptr;
    return atoi(ptr0);

ErrorNoKey:
    if (NoKeyErr != NO_ERR)
        throw new CWBCLNT_ERR( NoKeyErr );
    return 0;
}

/* FUNCTION: TermInit
*
* PURPOSE:      This function initializes the
client terminal structure; it is called when the
TPCC.DLL
*
*               is first loaded by the
inet service.
*/

void TermInit(void)
{
    EnterCriticalSection(&TermCriticalSection);

    Term.iMasterSyncId = 1;
    Term.iNumEntries = Reg.dwMaxConnections+1;

    Term.pClientData = NULL;
    Term.pClientData =
(PCLIENTDATA)malloc(Term.iNumEntries *
sizeof(CLIENTDATA));
    if (Term.pClientData == NULL)
    {
        LeaveCriticalSection(&TermCriticalSection);
        throw new CWBCLNT_ERR(
ERR_MEM_ALLOC_FAILED );
    }
}

```

```

}

ZeroMemory( Term.pClientData,
Term.iNumEntries * sizeof(CLIENTDATA) );

Term.iFreeList =
Term.iNumEntries-1;
// build free list
// note: Term.pClientData[0].iNextFree gets
set to -1, which marks it as "in use".
// This is intentional, as the zero
entry is used as an anchor and never
terminal. // allocated as an actual
for(int i=0; i<Term.iNumEntries; i++)
    Term.pClientData[i].iNextFree = i-
1;

LeaveCriticalSection(&TermCriticalSection);

/* FUNCTION: TermDeleteAll
*
* PURPOSE:      This function frees allocated
resources associated with the terminal structure.
*
* ARGUMENTS:    none
*
* RETURNS:      None
*
* COMMENTS:     This function is called only when
the inet service unloads the TPCC.DLL
*/

void TermDeleteAll(void)
{
    EnterCriticalSection(&TermCriticalSection);

    for(int i=1; i<Term.iNumEntries; i++)
    {
        if (Term.pClientData[i].iNextFree
== -1)
            delete
Term.pClientData[i].pTxn;
    }

    Term.iFreeList = 0;
    Term.iNumEntries = 0;
    if ( Term.pClientData )
        free(Term.pClientData);
    Term.pClientData = NULL;

    LeaveCriticalSection(&TermCriticalSection);
}

/* FUNCTION: TermAdd
*
* PURPOSE:      This function assigns a terminal id
which is used to identify a client browser.
*
* RETURNS:      int
                assigned terminal id
*/

int TermAdd(void)
{
    DWORD    i;
    int      iNewTerm, iTickCount;

    if (Term.iNumEntries == 0)

```

```

        return -1;

        EnterCriticalSection(&TermCriticalSection);
        if (Term.iFreeList != 0)
        {
            // position is available
            iNewTerm = Term.iFreeList;
            Term.iFreeList =
Term.pClientData[iNewTerm].iNextFree;
            Term.pClientData[iNewTerm].iNextFree = -1;
        }
        // indicates this position is in use
        else
        {
            // no open slots, so find the slot
that hasn't been used in the longest time and reuse it
            for(iNewTerm=1, i=1,
iTickCount=0x7FFFFFFF; i<Reg.dwMaxConnections; i++)
            {
                if (iTickCount >
Term.pClientData[i].iTickCount)
                {
                    iTickCount =
Term.pClientData[i].iTickCount;
                    iNewTerm = i;
                }
            }
            // if oldest term is less than one
minute old, it probably means that more connections
// are being attempted than were
specified as "Max Connections" at install. In this
case,
            // do not bump existing connection;
instead, return error to requestor.
            if ((GetTickCount() - iTickCount) <
60000)
            {
                LeaveCriticalSection(&TermCriticalSection);
                throw new CWBCLNT_ERR(
ERR_MAX_CONNECTIONS_EXCEEDED );
            }
        }

        Term.pClientData[iNewTerm].iTickCount =
GetTickCount();
        Term.pClientData[iNewTerm].iSyncId =
Term.iMasterSyncId++;
        Term.pClientData[iNewTerm].pTxn = NULL;

        LeaveCriticalSection(&TermCriticalSection);
        return iNewTerm;
    }

/* FUNCTION: TermDelete
*
* PURPOSE:      This function makes a terminal
entry in the Term array available for reuse.
*
* ARGUMENTS:    int
                id
                Terminal id of client exiting
*/

void TermDelete(int id)
{
    if ( id > 0 && id < Term.iNumEntries )
    {
        delete Term.pClientData[id].pTxn;
        // put onto free list
    }
}

```

```

EnterCriticalSection(&TermCriticalSection);
Term.pClientData[i].iNextFree =
Term.iFreeList;
Term.iFreeList = id;
LeaveCriticalSection(&TermCriticalSection);
}
}

```

```

/* FUNCTION: MakeErrorForm
*/

```

```

void ErrorForm(EXTENSION_CONTROL_BLOCK *pECB, int
iType, int iErrorNum, int iTermId, int iSyncId, char
*szErrorText, char *

```

```

szBuffer )
{
    wsprintf(szBuffer,
    "<HTML><HEAD><TITLE>TPC-C
Error</TITLE></HEAD><BODY>"
    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
    "<BOLD>An Error
Occurred</BOLD><BR><BR>"
    "%s"
    "<BR><BR><HR>"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
    "</FORM></BODY></HTML>"
    , iType, iErrorNum, MAIN_MENU_FORM,
iTermId, iSyncId, szErrorText );
}

```

```

/* FUNCTION: MakeMainMenuForm
*/

```

```

void MakeMainMenuForm(int iTermId, int iSyncId, char
*szForm)
{
    wsprintf(szForm,
    "<HTML><HEAD><TITLE>TPC-C Main
Menu</TITLE></HEAD><BODY>"
    "Select Desired
Transaction.<BR><HR>"
    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"

```

```

    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
    "</FORM></BODY></HTML>"
    , MAIN_MENU_FORM, iTermId,
iSyncId);
}

```

```

/* FUNCTION: MakeStockLevelForm
*/

```

```

* PURPOSE: This function constructs the Stock
Level HTML page.
* COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
be freed except
when the client terminal id is no longer needed.
*/

```

```

void MakeStockLevelForm(int iTermId, STOCK_LEVEL_DATA
*pStockLevelData, BOOL bInput, char *szForm)
{
    int c;
    c = wsprintf(szForm,
    "<HTML><HEAD><TITLE>TPC-C Stock
Level</TITLE></HEAD><FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
    "<PRE><font face=\"Courier\">
Stock-Level<BR>"
    "Warehouse: %6.6d District:
%2.2d<BR><BR>",
    STOCK_LEVEL_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id,
Term.pClientData[iTermId].d_id);
    if ( bInput )
    {
        strcpy(szForm+c,
        "Stock Level Threshold:
<INPUT NAME=\"TT\" SIZE=2><BR><BR>"

```

```

    "low stock:
</font><BR><BR><BR><BR><BR><BR><BR><BR>
<BR><BR><BR></PRE><HR>"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
    "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
    "</FORM></HTML>" );
    }
    else
    {
        wsprintf(szForm+c,
        "Stock Level Threshold:
%2.2d<BR><BR>"
        "low stock: %3.3d</font>
<BR><BR><BR><BR><BR><BR><BR><BR>
<BR><BR><BR><BR></PRE><HR>"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
        "</FORM></HTML>"
        , pStockLevelData-
>threshold, pStockLevelData->low_stock);
    }
}

```

```

/* FUNCTION: MakeNewOrderForm
*/

```

```

* COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
be freed except
when the client terminal id is no longer needed.
*/

```

```

void MakeNewOrderForm(int iTermId, NEW_ORDER_DATA
*pNewOrderData, BOOL bInput, char *szForm)
{
    int i, c;
    BOOL bValid;
    static char szBR[] = "<BR><BR><BR><BR><BR><BR><BR><BR><BR><BR>";
    if (!bInput)
        assert( pNewOrderData-
>exec_status_code == eOK || pNewOrderData-
>exec_status_code == eInvalidItem );
    bValid = (bInput || (pNewOrderData-
>exec_status_code == eOK));
    c = wsprintf(szForm,
    "<HTML><HEAD><TITLE>TPC-C New
Order</TITLE></HEAD><BODY>"
    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"

```

```

        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<PRE><font face=\"Courier\">
New Order<BR>"
        , bValid ? 0 : ERR_BAD_ITEM_ID,
NEW_ORDER_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);

        if ( bInput )
        {
            c += sprintf(szForm+c, "Warehouse:
%6.6d ", Term.pClientData[iTermId].w_id );

            strcpy( szForm+c,
                "District: <INPUT
                Date:<BR>"
NAME=\"DID*\" SIZE=1>
                "Customer: <INPUT
NAME=\"CID*\" SIZE=4> Name:
                Credit: %Disc:<BR>"
                "Order Number:
                W_tax: D_tax:<BR>"
                " Supp_W Item_Id Item
                Qty Stock B/G Price
Amount<BR>"
                "<INPUT NAME=\"SP00*\"
                SIZE=4> <INPUT NAME=\"IID00*\"
                SIZE=6>
                <INPUT
NAME=\"Qty00*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP01*\"
                SIZE=4> <INPUT NAME=\"IID01*\"
                SIZE=6>
                <INPUT
NAME=\"Qty01*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP02*\"
                SIZE=4> <INPUT NAME=\"IID02*\"
                SIZE=6>
                <INPUT
NAME=\"Qty02*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP03*\"
                SIZE=4> <INPUT NAME=\"IID03*\"
                SIZE=6>
                <INPUT
NAME=\"Qty03*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP04*\"
                SIZE=4> <INPUT NAME=\"IID04*\"
                SIZE=6>
                <INPUT
NAME=\"Qty04*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP05*\"
                SIZE=4> <INPUT NAME=\"IID05*\"
                SIZE=6>
                <INPUT
NAME=\"Qty05*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP06*\"
                SIZE=4> <INPUT NAME=\"IID06*\"
                SIZE=6>
                <INPUT
NAME=\"Qty06*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP07*\"
                SIZE=4> <INPUT NAME=\"IID07*\"
                SIZE=6>
                <INPUT
NAME=\"Qty07*\" SIZE=1><BR>"
                " <INPUT NAME=\"SP08*\"
                SIZE=4> <INPUT NAME=\"IID08*\"
                SIZE=6>

```

```

<INPUT
NAME=\"Qty08*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP09*\"
        SIZE=4> <INPUT NAME=\"IID09*\"
        SIZE=6>
        <INPUT
NAME=\"Qty09*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP10*\"
        SIZE=4> <INPUT NAME=\"IID10*\"
        SIZE=6>
        <INPUT
NAME=\"Qty10*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP11*\"
        SIZE=4> <INPUT NAME=\"IID11*\"
        SIZE=6>
        <INPUT
NAME=\"Qty11*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP12*\"
        SIZE=4> <INPUT NAME=\"IID12*\"
        SIZE=6>
        <INPUT
NAME=\"Qty12*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP13*\"
        SIZE=4> <INPUT NAME=\"IID13*\"
        SIZE=6>
        <INPUT
NAME=\"Qty13*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP14*\"
        SIZE=4> <INPUT NAME=\"IID14*\"
        SIZE=6>
        <INPUT
NAME=\"Qty14*\" SIZE=1><BR>"
        "Execution Status:
Total:<BR>"
        "</font></PRE><HR>"
        "<INPUT TYPE=\"submit\">"
NAME=\"CMD\" VALUE=\"Process\">"
        "<INPUT TYPE=\"submit\">"
NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM></HTML>"
    );
    }
    else
    {
        c += sprintf(szForm+c, "Warehouse:
%6.6d District: %2.2d Date: ",
                pNewOrderData->w_id,
                pNewOrderData->d_id);

        if ( bValid )
        {
            c += sprintf(szForm+c,
                "%2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d",
                pNewOrderData->
                >o_entry_d.day,
                pNewOrderData->
                >o_entry_d.month,
                pNewOrderData->
                >o_entry_d.year,
                pNewOrderData->
                >o_entry_d.hour,
                pNewOrderData->
                >o_entry_d.minute,
                pNewOrderData->
                >o_entry_d.second);
        }

        c += sprintf(szForm+c,
            "<BR>Customer: %4.4d Name: %-16s Credit: %-2s ",
                pNewOrderData->c_id,
                pNewOrderData->c_credit);
    }

```

```

        if ( bValid )
        {
            c += sprintf(szForm+c,
                "%Disc: %5.2f <BR>"
                "Order Number: %8.8d Number of Lines: %2.2d
                W_tax: %5.2f D_tax: %5
                .2f <BR> <BR>"
                " Supp_W Item_Id Item Name
                Qty Stock B/G Price
                Amount<BR>",
                100.0*pNewOrderData->c_discount,
                pNewOrderData->
                >o_id,
                pNewOrderData->
                >o_ol_cnt,
                100.0 *
                pNewOrderData->w_tax,
                100.0 *
                pNewOrderData->d_tax);

            for(i=0; i<pNewOrderData->
                >o_ol_cnt; i++)
            {
                c +=
                sprintf(szForm+c, "%6.6d %6.6d %24s %2.2d
                %3.3d %1.1s %6.2f %7.2f
                <BR>",
                pNewOrderData->OL[i].ol_supply_w_id,
                pNewOrderData->OL[i].ol_i_id,
                pNewOrderData->OL[i].ol_i_name,
                pNewOrderData->OL[i].ol_quantity,
                pNewOrderData->OL[i].ol_stock,
                pNewOrderData->OL[i].ol_brand_generic,
                pNewOrderData->OL[i].ol_i_price,
                pNewOrderData->OL[i].ol_amount );
            }
        }
        else
        {
            c += sprintf(szForm+c,
                "%Disc:<BR>"
                "Order Number:
                %8.8d Number of Lines:
                D_tax:<BR> <BR>"
                " Supp_W
                Item_Id Item Name
                Qty Stock B/G
                Price Amount<BR>"
                pNewOrderData->o_id);

            i = 0;

            strncpy( szForm+c, szBR, (15-i)*5
                );
            c += (15-i)*5;

```

```

        if ( bValid )
            c += sprintf(szForm+c,
"Execution Status: Transaction committed.
Total:   $%8.2f

",
                pNewOrderData-
>total_amount);
        else
            c += wsprintf(szForm+c,
"Execution Status: Item number is not valid.
Total:");
        strcpy(szForm+c,
            " <BR></font></PRE><HR>"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
            " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
            " </FORM></HTML>"
        );
    }
}
/* FUNCTION: MakePaymentForm
 *
 * COMMENTS: The internal client buffer is
 * created when the terminal id is assigned and should not
 * be freed except
 * when the client terminal id is no longer needed.
 */
void MakePaymentForm(int iTermId, PAYMENT_DATA
*pPaymentData, BOOL bInput, char *szForm)
{
    int c;
    c = wsprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C
Payment</TITLE></HEAD><BODY>"
        " <FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
        " <INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
        " <INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        " <INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        " <INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
        " <INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        " <PRE><font face=\"Courier\">
Payment<BR>"
        "Date: "
        " , PAYMENT_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);
    if ( !bInput )
    {
        c += wsprintf(szForm+c, "%2.2d-
%2.2d-%4.4d %2.2d:%2.2d:%2.2d",
            pPaymentData->h_date.day,

```

```

            pPaymentData-
>h_date.month,
            pPaymentData-
>h_date.year,
            pPaymentData-
>h_date.hour,
            pPaymentData-
>h_date.minute,
            pPaymentData-
>h_date.second);
        if ( bInput )
        {
            c += wsprintf(szForm+c,
                "%6.6d
                " <BR> <BR>Warehouse:
                "
                District: <INPUT NAME=\"DID*\" SIZE=1><BR> <BR> <BR>
                <BR> <BR>"
                "Customer: <INPUT
NAME=\"CID*\" SIZE=4>"
                "Cust-Warehouse: <INPUT
NAME=\"CWI*\" SIZE=4> "
                "Cust-District: <INPUT
NAME=\"CDI*\" SIZE=1><BR>"
                "Name:
                <INPUT NAME=\"CLT*\" SIZE=16>
                Since:<BR>"
                "
                Credit:<BR>"
                "
                Disc:<BR>"
                "
                Phone:<BR> <BR>"
                "Amount Paid:
                $<INPUT NAME=\"HAM*\" SIZE=7>
                New Cust-
                Balance:<BR>"
                "Credit Limit:<BR>
                <BR>Cust-Data: <BR> <BR> <BR>
                <BR></font></PRE><HR>"
                " <INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\"><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"\">"
                Menu">"
                " </BODY></FORM></HTML>"
            );
            Term.pClientData[iTermId].w_id);
        }
        else
        {
            c += wsprintf(szForm+c,
                "%6.6d
                " <BR> <BR>Warehouse:
                "
                District: %2.2d<BR>"
                "%-20s
                "%-20s
                "%-20s
                "%-20s %-2s %5.5s-%4.4s
                "%-20s %-2s %5.5s-%4.4s<BR> <BR>"
                "Customer: %4.4d Cust-
                Warehouse: %6.6d Cust-District: %2.2d<BR>"
                "Name: %16s %-2s %-16s
                Since: %2.2d-%2.2d-%4.4d<BR>"
                "%-20s
                Credit: %2s<BR>"
            );
            Term.pClientData[iTermId].w_id, pPaymentData->d_id
            , pPaymentData-
>w_street_1, pPaymentData->d_street_1

```

```

            , pPaymentData-
>w_street_2, pPaymentData->d_street_2
            , pPaymentData->w_city,
            pPaymentData->w_state, pPaymentData->w_zip,
            pPaymentData->w_zip+5
            , pPaymentData->d_city,
            pPaymentData->d_state, pPaymentData->d_zip,
            pPaymentData->d_zip+5
            , pPaymentData->c_id,
            pPaymentData->c_d_id
            , pPaymentData->c_first,
            pPaymentData->c_middle, pPaymentData->c_last
            , pPaymentData-
>c_since.day, pPaymentData->c_since.month,
            pPaymentData->c_since.year
            , pPaymentData-
>c_street_1, pPaymentData->c_credit
            );
            c += sprintf(szForm+c,
                "
                "%-20s
                "%5.2f<BR>",
                pPaymentData->c_street_2,
                100.0*pPaymentData->c_discount);
            c += wsprintf(szForm+c,
                "
                "%-20s
                "%5.5s-%4.4s Phone: %6.6s-%3.3s-%3.3s-%4.4s<BR>
                <BR>",
                pPaymentData->c_city,
                pPaymentData->c_state, pPaymentData->c_zip,
                pPaymentData->c_zip+5,
                pPaymentData->c_phone,
                pPaymentData->c_phone+6, pPaymentData->c_phone+9,
                pPaymentData->c_phone+12 );
            c += sprintf(szForm+c,
                "Amount Paid:
                $%7.2f New Cust-Balance: $%14.2f<BR>
                "Credit Limit:
                $%13.2f<BR> <BR>"
                , pPaymentData->h_amount,
                pPaymentData->c_balance
                , pPaymentData-
>c_credit_lim
            );
            if ( pPaymentData->c_credit[0] ==
'B' && pPaymentData->c_credit[1] == 'C' )
                c += wsprintf(szForm+c,
                    "Cust-Data: %5.50s<BR>
                    %5.50s<BR>
                    %5.50s<BR>",
                    pPaymentData->c_data, pPaymentData-
>c_data+50, pPaymentData->c_data+100,
                    pPaymentData->c_data+150 );
            else
                strcpy(szForm+c, "Cust-
Data: <BR> <BR> <BR> <BR>");
            strcat(szForm,
                "
                " <INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..NewOrder..\">"
                " <INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Payment..\">"

```

```

        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Delivery..\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Order-Status..\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Stock-Level..\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Exit..\">"
        "</BODY></FORM></HTML>";
    }
}
/* FUNCTION: MakeOrderStatusForm
 *
 * COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
 * be freed except
when the client terminal id is no longer needed.
 */
void MakeOrderStatusForm(int iTermId, ORDER_STATUS_DATA
*pOrderStatusData, BOOL bInput, char *szForm)
{
    int i, c;
    static char szBR[] = " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR>";
    c = sprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C Order-
Status</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMIN\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<PRE><font face=\"Courier\">
Order-Status<BR>"
        "Warehouse: %6.6d ",
        ORDER_STATUS_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id);
    if ( bInput )
    {
        strcpy(szForm+c,
            "District: <INPUT
NAME=\"DID*\" SIZE=1><BR>"
            "Customer: <INPUT
NAME=\"CID*\" SIZE=4> Name:
<INPUT NAME=\"CLT*\" SIZE=23
><BR>"
            "Cust-Balance:<BR> <BR>"
            "Order-Number:
Entry-Date: Carrier-Number:<BR>"
            "Supply-W Item-Id
Qty Amount Delivery-Date<BR> <BR> <BR> <BR>
<BR>";
    }
}

```

```

        " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Process\"><INPUT
TYPE=\"submit\" NAME=\"CMD\" VALUE
=\"Menu\">"
        "</BODY></FORM></HTML>"
    );
    }
    else
    {
        c += sprintf(szForm+c,
            "District: %2.2d<BR>"
            "Customer: %4.4d Name:
%-16s %-2s %-16s<BR>",
            pOrderStatusData->d_id,
pOrderStatusData->c_id,
pOrderStatusData->c_first, pOrderStatusData->c_middle, pOrderStatusData->c_last);
        c += sprintf(szForm+c, "Cust-
Balance: %$9.2f<BR> <BR>",
            pOrderStatusData->c_balance);
        c += sprintf(szForm+c,
            "Order-Number: %8.8d
Entry-Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d
Carrier-Number: %2.2d<BR>"
            "Supply-W Item-Id
Qty Amount Delivery-Date<BR>",
            pOrderStatusData->o_id,
pOrderStatusData->o_entry_d.day,
pOrderStatusData->o_entry_d.month,
pOrderStatusData->o_entry_d.year,
pOrderStatusData->o_entry_d.hour,
pOrderStatusData->o_entry_d.minute,
pOrderStatusData->o_entry_d.second,
pOrderStatusData->o_carrier_id);
        for(i=0; i< pOrderStatusData->o_ol_cnt; i++)
        {
            c += sprintf(szForm+c, "
%6.6d %6.6d %2.2d %$8.2f %2.2d-%2.2d-
%4.4d<BR>",
            pOrderStatusData->OL[i].ol_supply_w_id,
pOrderStatusData->OL[i].ol_i_id,
pOrderStatusData->OL[i].ol_quantity,
pOrderStatusData->OL[i].ol_amount,
pOrderStatusData->OL[i].ol_delivery_d.day,
pOrderStatusData->OL[i].ol_delivery_d.month,
pOrderStatusData->OL[i].ol_delivery_d.year);
        }
    }
}

```

```

        strncpy( szForm+c, szBR, (15-i)*5
);
        c += (15-i)*5;
        strcpy(szForm+c,
            "</font></PRE><HR><INPUT
TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..NewOrder..\">"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
            "</BODY></FORM></HTML>"
        );
    }
}
/* FUNCTION: MakeDeliveryForm
 *
 * COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
 * be freed except
when the client terminal id is no longer needed.
 */
void MakeDeliveryForm(int iTermId, DELIVERY_DATA
*pDeliveryData, BOOL bInput, char *szForm)
{
    int c;
    c = sprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C
Delivery</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMIN\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<PRE><font face=\"Courier\">
Delivery<BR>"
        "Warehouse: %6.6d<BR> <BR>",
        (!bInput && (pDeliveryData->exec_status_code != eOK)) ? ERR_TYPE_DELIVERY_POST :
0,
        DELIVERY_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id);
    if ( bInput )
    {
        strcpy( szForm+c,
            "Carrier Number: <INPUT
NAME=\"OCD*\" SIZE=1><BR> <BR>"
            "Execution Status: <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR>
" <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> </font></PRE><HR>"
            "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
        );
    }
}

```



```

NAME="CMD" VALUE="Menu" "<INPUT TYPE="submit"
)";
}
else
{
    wsprintf( szForm+c,
"Carrier Number:
%2.2d<BR> <BR>"
"Execution Status: %s
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
" <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> </font></PRE>"
"<HR><INPUT
TYPE="submit" NAME="CMD" VALUE="..NewOrder..">"
" <INPUT TYPE="submit"
NAME="CMD" VALUE="..Payment..">"
" <INPUT TYPE="submit"
NAME="CMD" VALUE="..Delivery..">"
" <INPUT TYPE="submit"
NAME="CMD" VALUE="..Order-Status..">"
" <INPUT TYPE="submit"
NAME="CMD" VALUE="..Stock-Level..">"
" <INPUT TYPE="submit"
NAME="CMD" VALUE="..Exit..">"
"</BODY></FORM></HTML>"
, pDeliveryData-
, pDeliveryData-
)
>exec_status_code == eOK ? "Delivery has been queued."
: "Delivery Post Failed "
);
}
}
/* FUNCTION: ProcessNewOrderForm
* PURPOSE: This function gets and validates
the input data from the new order form
* filling in the required
input variables. it then calls the SQLNewOrder
transaction, constructs
the output form and writes it back to client
browser.
*/
void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
    PNEW_ORDER_DATA pNewOrder;
    pNewOrder = Term.pClientData[iTermId].pTxn-
>BuffAddr_NewOrder();
    ZeroMemory(pNewOrder,
sizeof(NEW_ORDER_DATA));
    pNewOrder->w_id =
Term.pClientData[iTermId].w_id;
    GetNewOrderData(pECB->lpszQueryString,
pNewOrder);
    Term.pClientData[iTermId].pTxn->NewOrder();
    pNewOrder = Term.pClientData[iTermId].pTxn-
>BuffAddr_NewOrder();
    MakeNewOrderForm(iTermId, pNewOrder,
OUTPUT_FORM, szBuffer );
}
/* FUNCTION: void ProcessPaymentForm

```

```

*
* PURPOSE: This function gets and validates
the input data from the payment form
* filling in the required
input variables. It then calls the SQLPayment
transaction, constructs
the output form and writes it back to client
browser.
*
* ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
passed in structure pointer from inetsrv.
int
iTermId client browser terminal id
*/
void ProcessPaymentForm(EXTENSION_CONTROL_BLOCK *pECB,
int iTermId, char *szBuffer)
{
    PPAYMENT_DATA pPayment;
    pPayment = Term.pClientData[iTermId].pTxn-
>BuffAddr_Payment();
    ZeroMemory(pPayment, sizeof(PAYMENT_DATA));
    pPayment->w_id =
Term.pClientData[iTermId].w_id;
    GetPaymentData(pECB->lpszQueryString,
pPayment);
    Term.pClientData[iTermId].pTxn->Payment();
    pPayment = Term.pClientData[iTermId].pTxn-
>BuffAddr_Payment();
    MakePaymentForm(iTermId, pPayment,
OUTPUT_FORM, szBuffer);
}
/* FUNCTION: ProcessOrderStatusForm
* PURPOSE: This function gets and validates
the input data from the Order Status
form filling in the
required input variables. It then calls the
SQLOrderStatus
transaction, constructs the output form and writes it
back to client browser.
*
* ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
passed in structure pointer from inetsrv.
int
iTermId client browser terminal id
*/
void ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
    PORDER_STATUS_DATA pOrderStatus;
    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
    ZeroMemory(pOrderStatus,
sizeof(ORDER_STATUS_DATA));
    pOrderStatus->w_id =
Term.pClientData[iTermId].w_id;
    GetOrderStatusData(pECB->lpszQueryString,
pOrderStatus);
    Term.pClientData[iTermId].pTxn-
>OrderStatus();

```

```

    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
    MakeOrderStatusForm(iTermId, pOrderStatus,
OUTPUT_FORM, szBuffer);
}
/* FUNCTION: ProcessDeliveryForm
*
* PURPOSE: This function gets and validates
the input data from the delivery form
* filling in the required
input variables. It then calls the PostDeliveryInfo
Api, The client is then
informed that the transaction has been posted.
*
* ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
passed in structure pointer from inetsrv.
int
iTermId client browser terminal id
*/
void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK *pECB,
int iTermId, char *szBuffer)
{
    char *ptr = pECB->lpszQueryString;
    PDELIVERY_DATA pDelivery;
    pDelivery = Term.pClientData[iTermId].pTxn-
>BuffAddr_Delivery();
    ZeroMemory(pDelivery, sizeof(DELIVERY_DATA));
    pDelivery->w_id =
Term.pClientData[iTermId].w_id;
    pDelivery->o_carrier_id =
GetIntKeyValue(ptr, "OCD");
    ERR_DELIVERY_MISSING_OCD_KEY,
    ERR_DELIVERY_CARRIER_INVALID);
    if ( pDelivery->o_carrier_id > 10 ||
pDelivery->o_carrier_id < 1 )
        throw new CWBECINT_ERR(
ERR_DELIVERY_CARRIER_ID_RANGE );
    if (dwNumDeliveryThreads)
    {
        //post delivery info
        if ( PostDeliveryInfo(pDelivery-
>w_id, pDelivery->o_carrier_id) )
            pDelivery-
>exec_status_code = eDeliveryFailed;
        else
            pDelivery-
>exec_status_code = eOK;
    }
    else // delivery is done synchronously if no
delivery threads configured
        Term.pClientData[iTermId].pTxn-
>Delivery();
    pDelivery = Term.pClientData[iTermId].pTxn-
>BuffAddr_Delivery();
    MakeDeliveryForm(iTermId, pDelivery,
OUTPUT_FORM, szBuffer);
}
/* FUNCTION: ProcessStockLevelForm
*
* PURPOSE: This function gets and validates
the input data from the Stock Level

```

```

*           form filling in the
required input variables. It then calls the
*           SQLStockLevel
transaction, constructs the output form and writes it
*           back to client browser.
*
* ARGUMENTS:     EXTENSION_CONTROL_BLOCK      *pECB
                passed in structure pointer from inetsrv.
*
                int
                iTermId  client browser terminal id
*/

void ProcessStockLevelForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
    char          *ptr = pECB-
>lpszQueryString;

    PSTOCK_LEVEL_DATA  pStockLevel;

    pStockLevel = Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
    ZeroMemory( pStockLevel,
sizeof(STOCK_LEVEL_DATA) );

    pStockLevel->w_id =
Term.pClientData[iTermId].w_id;
    pStockLevel->d_id =
Term.pClientData[iTermId].d_id;

    pStockLevel->threshold = GetIntKeyValue(&ptr,
"TT*", ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID);
    if ( pStockLevel->threshold >= 100 ||
pStockLevel->threshold < 0 )
        throw new CWEBCLNT_ERR(
ERR_STOCKLEVEL_THRESHOLD_RANGE );

    Term.pClientData[iTermId].pTxn->StockLevel();

    pStockLevel = Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
    MakeStockLevelForm(iTermId, pStockLevel,
OUTPUT_FORM, szBuffer);
}

/* FUNCTION: GetNewOrderData
*
* PURPOSE:     This function extracts and
validates the new order form data from an http command
string.
*
* ARGUMENTS:     LPSTR          client browser
                lpszQueryString  http command string
*
                NEW_ORDER_DATA  *pNewOrderData
                pointer to new
order data structure
*/

void GetNewOrderData(LPSTR lpszQueryString,
NEW_ORDER_DATA *pNewOrderData)
{
    char          szTmp[26];
    int           i;
    short        items;
    int          ol_i_id, ol_quantity;
    char          *ptr = lpszQueryString;

```

```

                static char szSP[MAX_OL_NEW_ORDER_ITEMS][6] =
                { "SP00*", "SP01*", "SP02*",
"SP03*", "SP04*",
                "SP05*", "SP06*", "SP07*",
"SP08*", "SP09*",
                "SP10*", "SP11*", "SP12*",
"SP13*", "SP14*" };
                static char szIID[MAX_OL_NEW_ORDER_ITEMS][7]
=
                { "IID00*", "IID01*", "IID02*",
"IID03*", "IID04*",
                "IID05*", "IID06*", "IID07*",
"IID08*", "IID09*",
                "IID10*", "IID11*", "IID12*",
"IID13*", "IID14*" };
                static char szQty[MAX_OL_NEW_ORDER_ITEMS][7]
=
                { "Qty00*", "Qty01*", "Qty02*",
"Qty03*", "Qty04*",
                "Qty05*", "Qty06*", "Qty07*",
"Qty08*", "Qty09*",
                "Qty10*", "Qty11*", "Qty12*",
"Qty13*", "Qty14*" };

                pNewOrderData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_DISTRICT_INVALID);
                pNewOrderData->c_id = GetIntKeyValue(&ptr,
"CID*", ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_CUSTOMER_INVALID);

                for(i=0, items=0; i<MAX_OL_NEW_ORDER_ITEMS;
i++)
                {
                    GetIntKeyValue(&ptr, szSP[i], szTmp,
sizeof(szTmp), ERR_NEWORDER_MISSING_SUPPW_KEY);
                    if ( szTmp[0] )
                        if ( !IsNumeric(szTmp) )
                            throw new
CWEBCLNT_ERR( ERR_NEWORDER_SUPPW_INVALID );
                    pNewOrderData-
>OL[items].ol_supply_w_id = atoi(szTmp);

                    ol_i_id = pNewOrderData-
>OL[items].ol_i_id =

                    GetIntKeyValue(&ptr, szIID[i],
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_ITEMID_INVALID);
                    if ( ol_i_id > 999999 ||
ol_i_id < 1 )
                        throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_RANGE );

                    ol_quantity =
pNewOrderData->OL[items].ol_quantity =

                    GetIntKeyValue(&ptr, szQty[i],
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_QTY_INVALID);
                    if ( ol_quantity > 99 ||
ol_quantity < 1 )
                        throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_RANGE );

                    items++;
                }
                else
                {
                    // nothing entered for
supply warehouse, so item id and qty must also be blank

```

```

                GetKeyValue(&ptr,
szIID[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_IID_KEY);
                if ( szTmp[0] )
                    throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_WITHOUT_SUPPW );

                GetKeyValue(&ptr,
szQty[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_QTY_KEY);
                if ( szTmp[0] )
                    throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_WITHOUT_SUPPW );
                }
                if ( items == 0 )
                    throw new CWEBCLNT_ERR(
ERR_NEWORDER_NOITEMS_ENTERED );
                pNewOrderData->o_ol_cnt = items;
}

/* FUNCTION: GetPaymentData
*
* PURPOSE:     This function extracts and
validates the payment form data from an http command
string.
*
* ARGUMENTS:     LPSTR          client browser
                lpszQueryString  http command string
*
                PAYMENT_DATA    *pPaymentData
                pointer to
payment data structure
*/

void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA
*pPaymentData)
{
    char          szTmp[26];
    char          *ptr = lpszQueryString;
    BOOL         bCustIdBlank;
    int          iLen;

    pPaymentData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_DISTRICT_INVALID);

    GetKeyValue(&ptr, "CID*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_CID_KEY);
    if ( szTmp[0] == 0 )
        {
            bCustIdBlank = TRUE;
            pPaymentData->c_id = 0;
        }
    else
        {
            // parse customer id and verify
that last name was NOT entered
            bCustIdBlank = FALSE;
            if ( !IsNumeric(szTmp) )
                throw new CWEBCLNT_ERR(
ERR_PAYMENT_CUSTOMER_INVALID );
            pPaymentData->c_id = atoi(szTmp);
        }

    pPaymentData->c_w_id = GetIntKeyValue(&ptr,
"CWI*", ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_CWI_INVALID);
    pPaymentData->c_d_id = GetIntKeyValue(&ptr,
"CDI*", ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_CDI_INVALID);

```

```

        if ( bCustIdBlank )
        {
            // customer id is blank, so last
            name must be entered
            GetKeyValue(&ptr, "CLT*", szTmp,
            sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
            if ( szTmp[0] == 0 )
                throw new CWEBCLNT_ERR(
            ERR_PAYMENT_MISSING_CID_CLT );

            _strupr( szTmp );
            if ( strlen(szTmp) > LAST_NAME_LEN
        )
            throw new CWEBCLNT_ERR(
            ERR_PAYMENT_LAST_NAME_TO_LONG );

            strcpy(pPaymentData->c_last,
            szTmp);
            // pad with spaces so that the
            client layer doesn't
            have to do it
            // before passing parameters to
            stored procedure
            iLen = strlen(pPaymentData-
            >c_last);
            memset(pPaymentData->c_last + iLen,
            ' ', LAST_NAME_LEN - iLen);
            pPaymentData->c_last[LAST_NAME_LEN]
            = 0;
        }
        else
        {
            // parse customer id and verify
            that last name was NOT entered
            GetKeyValue(&ptr, "CLT*", szTmp,
            sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
            if ( szTmp[0] != 0 )
                throw new CWEBCLNT_ERR(
            ERR_PAYMENT_CID_AND_CLT );
        }

        GetKeyValue(&ptr, "HAM*", szTmp,
        sizeof(szTmp), ERR_PAYMENT_MISSING_HAM_KEY);
        if (!IsDecimal(szTmp))
            throw new CWEBCLNT_ERR(
            ERR_PAYMENT_HAM_INVALID );
        pPaymentData->h_amount = atof(szTmp);
        if ( pPaymentData->h_amount >= 10000.00 ||
        pPaymentData->h_amount < 0 )
            throw new CWEBCLNT_ERR(
            ERR_PAYMENT_HAM_RANGE );
    }

    /* FUNCTION: GetOrderStatusData
    *
    * PURPOSE: This function extracts and
    validates the payment form data from an http command
    string.
    */
    void GetOrderStatusData(LPSTR lpszQueryString,
    ORDER_STATUS_DATA *pOrderStatusData)
    {
        char szTmp[26];
        char *ptr = lpszQueryString;
        int iLen;

        pOrderStatusData->d_id = GetIntKeyValue(&ptr,
        "DID*", ERR_ORDERSTATUS_MISSING_DID_KEY,
        ERR_ORDERSTATUS_DID_INVALID);

        GetKeyValue(&ptr, "CID*", szTmp,
        sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CID_KEY);
        if ( szTmp[0] == 0 )

```

```

    {
        // customer id is blank, so last
        name must be entered
        pOrderStatusData->c_id = 0;
        GetKeyValue(&ptr, "CLT*", szTmp,
        sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
        if ( szTmp[0] == 0 )
            throw new CWEBCLNT_ERR(
            ERR_ORDERSTATUS_MISSING_CID_CLT );

        _strupr( szTmp );
        if ( strlen(szTmp) > LAST_NAME_LEN
    )
        throw new CWEBCLNT_ERR(
            ERR_ORDERSTATUS_CLT_RANGE );

        strcpy(pOrderStatusData->c_last,
        szTmp);
        // pad with spaces so that the
        client layer doesn't
        have to do it
        // before passing parameters to
        stored procedure
        iLen = strlen(pOrderStatusData-
        >c_last);
        memset(pOrderStatusData->c_last +
        iLen, ' ', LAST_NAME_LEN - iLen);
        pOrderStatusData-
        >c_last[LAST_NAME_LEN] = 0;
    }
    else
    {
        // parse customer id and verify
        that last name was NOT entered
        if ( !IsNumeric(szTmp) )
            throw new CWEBCLNT_ERR(
            ERR_ORDERSTATUS_CID_INVALID );
        pOrderStatusData->c_id =
        atoi(szTmp);
        GetKeyValue(&ptr, "CLT*", szTmp,
        sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
        if ( szTmp[0] != 0 )
            throw new CWEBCLNT_ERR(
            ERR_ORDERSTATUS_CID_AND_CLT );
    }
}

/* FUNCTION: BOOL IsNumeric(char *ptr)
*
* PURPOSE: This function determines if a
string is numeric. It fails if any characters other
than numeric and null
terminator are present.
*
* ARGUMENTS: char *ptr
pointer to string to check.
*
* RETURNS: BOOL FALSE if
string is not all numeric
TRUE if string contains only numeric
characters i.e. '0' - '9'
*/
BOOL IsNumeric(char *ptr)
{
    if ( *ptr == 0 )
        return FALSE;

    while( *ptr && isdigit(*ptr) )
        ptr++;
    return ( !*ptr );
}

```

```

/* FUNCTION: BOOL IsDecimal(char *ptr)
*
* PURPOSE: This function determines if a
string is a non-negative decimal value.
It fails if any characters other than a
series of numbers followed by
a decimal point, another
series of numbers, and a null terminator are present.
*
* ARGUMENTS: char *ptr
pointer to string to check.
*
* RETURNS: BOOL FALSE if
string is not a valid non-negative decimal value
TRUE if string is OK
*/
BOOL IsDecimal(char *ptr)
{
    char *dotptr;
    BOOL bValid;

    if ( *ptr == 0 )
        return FALSE;

    // find decimal point
    dotptr = strchr( ptr, '.' );
    if (dotptr == NULL)
        // no decimal point, so just check
        for numeric
        return IsNumeric(ptr);
    *dotptr = 0; // temporarily replace decimal
    with a terminator

    if ( *ptr != 0 )
        bValid = IsNumeric(ptr);
    // string starts with decimal point
    else if (*(dotptr+1) == 0)
        return FALSE; // nothing but a
    decimal point is bad
    else
        bValid = TRUE;

    if (*(dotptr+1) != 0)
        // check text after decimal point
        bValid &= IsNumeric(dotptr+1);

    *dotptr = '.'; // replace decimal point
    return bValid;
}

```

common/src/ReadRegistry.cpp

```

/* FILE: READREGISTRY.CPP
* Microsoft TPC-C
* Kit Ver. 4.20.000
* Copyright
* Microsoft, 1999
* All Rights Reserved
* not yet audited
*
* PURPOSE: Implementation for TPC-C Tuxedo
class.
* Contact: Charles Levine
(clevine@microsoft.com)

```

```

*
* Change history:
* 4.20.000 - first version
*/

/* FUNCTION: ReadTPCCRegistrySettings
*
* PURPOSE: This function reads the NT registry
for startup parameters. There parameters are
* under the TPCC key.
*
* RETURNS FALSE = no errors
TRUE = error reading
registry
*/
BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg )
{
    HKEY hKey;
    DWORD size;
    DWORD type;
    DWORD dwTmp;
    char szTmp[256];

    if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\TPCC", 0, KEY_READ, &hKey) !=
ERROR_SUCCESS )
        return TRUE;

    // determine database protocol to use; may be
either ODBC or DBLIB
    pReg->eDB_Protocol = Unspecified;
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "DB_Protocol", 0,
&type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp,
szDBNames[ODBC]) )
            pReg->eDB_Protocol =
ODBC;
        else if ( !strcmp(szTmp,
szDBNames[DBLIB]) )
            pReg->eDB_Protocol =
DBLIB;
    }

    pReg->eTxnMon = None;
    // determine txn monitor to use; may be
either TUXEDO, or blank
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "TxnMonitor", 0,
&type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp,
szTxnMonNames[TUXEDO]) )
            pReg->eTxnMon = TUXEDO;
        else if ( !strcmp(szTmp,
szTxnMonNames[ENCINA]) )
            pReg->eTxnMon = ENCINA;
        else if ( !strcmp(szTmp,
szTxnMonNames[COM]) )
            pReg->eTxnMon = COM;
    }

    pReg->bCOM_SinglePool = FALSE;
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "COM_SinglePool",
0, &type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp, "YES") )
            pReg->bCOM_SinglePool =
TRUE;
    }
}

```

```

}

pReg->dwMaxConnections = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"MaxConnections", 0, &type, (LPBYTE)&dwTmp, &size) ==
ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwMaxConnections = dwTmp;

pReg->dwMaxPendingDeliveries = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"MaxPendingDeliveries", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwMaxPendingDeliveries =
dwTmp;

pReg->dwNumberOfDeliveryThreads = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"NumberOfDeliveryThreads", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwNumberOfDeliveryThreads =
dwTmp;

size = sizeof( pReg->szPath );
if ( RegQueryValueEx(hKey, "Path", 0, &type,
(BYTE *)&Reg->szPath, &size) != ERROR_SUCCESS )
    pReg->szPath[0] = 0;

size = sizeof( pReg->szDbServer );
if ( RegQueryValueEx(hKey, "DbServer", 0,
&type, (BYTE *)&Reg->szDbServer, &size) !=
ERROR_SUCCESS )
    pReg->szDbServer[0] = 0;

size = sizeof( pReg->szDbName );
if ( RegQueryValueEx(hKey, "DbName", 0,
&type, (BYTE *)&Reg->szDbName, &size) != ERROR_SUCCESS
)
    pReg->szDbName[0] = 0;

size = sizeof( pReg->szDbUser );
if ( RegQueryValueEx(hKey, "DbUser", 0,
&type, (BYTE *)&Reg->szDbUser, &size) != ERROR_SUCCESS
)
    pReg->szDbUser[0] = 0;

size = sizeof( pReg->szDbPassword );
if ( RegQueryValueEx(hKey, "DbPassword", 0,
&type, (BYTE *)&Reg->szDbPassword, &size) !=
ERROR_SUCCESS )
    pReg->szDbPassword[0] = 0;

size = sizeof( pReg->szSPPrefix );
if ( RegQueryValueEx(hKey, "SPPrefix", 0,
&type, (BYTE *)&Reg->szSPPrefix, &size) !=
ERROR_SUCCESS )
    pReg->szSPPrefix[0] = L'\0';

pReg->dwConnectDelay = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey, "ConnectDelay",
0, &type, (LPBYTE)&dwTmp, &size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwConnectDelay = dwTmp;

pReg->bCallNoDuplicatesNewOrder = FALSE;
size = sizeof(dwTmp);

```

```

    if ( ( RegQueryValueEx(hKey,
"CallNoDuplicatesNewOrder", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
        && (type == REG_DWORD) )
        pReg->bCallNoDuplicatesNewOrder =
dwTmp;

    RegCloseKey(hKey);

    return FALSE;
}

```

common/src/ReadRegistry.h

```

/* FILE: ReadRegistry.h
* Microsoft TPC-C
Kit Ver. 4.20.000 Copyright
Microsoft, 1999
* All Rights Reserved
* not audited
*
* PURPOSE: Header for registry related code.
* Change history:
* 4.20.000 - first version
*/

enum DBPROTOCOL { Unspecified, ODBC, DBLIB };
const char *szDBNames[] = { "Unspecified", "ODBC",
"DBLIB" };

enum TXNMON { None, TUXEDO, ENCINA, COM };
const char *szTxnMonNames[] = { "NONE", "TUXEDO",
"ENCINA", "COM" };

//This structure defines the data necessary to keep
distinct for each terminal or client connection.
typedef struct _TPCCREGISTRYDATA
{
    enum DBPROTOCOL eDB_Protocol;
    enum TXNMON eTxnMon;
    BOOL bCOM_SinglePool;
    DWORD dwMaxConnections;
    DWORD dwMaxPendingDeliveries;
    DWORD dwNumberOfDeliveryThreads;
    char szPath[128];
    char szDbServer[32];
    char szDbName[32];
    char szDbUser[32];
    char szDbPassword[32];
    wchar_t szSPPrefix[32]; //tpcc_odbc.dll
    stored procedures prefix
    DWORD dwConnectDelay; // delay in ms
    to use in pacing connection open and close
    BOOL bCallNoDuplicatesNewOrder; //
    whether to check for non-duplicate item ids and call a
    different New Order SP
} TPCCREGISTRYDATA, *PTPCCREGISTRYDATA;

BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg
);

```

common/src/error.h

```
/*      FILE:          ERROR.H      Microsoft TPC-C
 *
 * Kit Ver. 4.20.000
 *
 *      Copyright
 *      Microsoft, 1999
 *      All Rights Reserved
 *
 *      Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 *
 *      PURPOSE:  Header file for error exception
 *      classes.
 *
 *      Change history:
 *      4.20.000 - updated rev number to
 *      match kit
 *      4.21.000 - fixed bug: ~CBaseErr
 *      needed to be declared virtual
 */
#pragma once

#ifndef _INC_STRING
#include <string.h>
#endif

const int m_szMsg_size = 512;
const int m_szApp_size = 64;
const int m_szLoc_size = 64;

//error message structure used in ErrorText routines
typedef struct _SERRORMSG
{
    int          iError;
    char         //error id of message
    szMsg[256];
    //message to sent to browser
} SERRORMSG;

typedef enum _ErrorLevel
{
    ERR_FATAL_LEVEL          = 2,
    ERR_WARNING_LEVEL        = 3,
    ERR_INFORMATION_LEVEL
} ErrorLevel;

#define ERR_TYPE_LOGIC          -1
    //logic error in program; internal
error
#define ERR_SUCCESS            0
    //success (a non-error error)
#define ERR_BAD_ITEM_ID        1
    //expected abort record in txnRecord
#define ERR_TYPE_DELIVERY_POST 2
    //expected delivery post failed
#define ERR_TYPE_WEBDLL        3
    //tpcc web generated error
#define ERR_TYPE_SQL           4
    //sql server generated error
```

```
#define ERR_TYPE_DBLIB        5
    //dblib generated error
#define ERR_TYPE_ODBC         6
    //odbc generated error
#define ERR_TYPE_SOCKET       7
    //error on communication socket
client rte only
#define ERR_TYPE_DEADLOCK     8
    //dblib and odbc only deadlock
condition
#define ERR_TYPE_COM          9
    //error from COM call
#define ERR_TYPE_TUXEDO       10
    //tuxedo error
#define ERR_TYPE_OS           11
    //operating system error
#define ERR_TYPE_MEMORY       12
    //memory allocation error
#define ERR_TYPE_TPCC_ODBC    13
    //error from tpcc odbc txn module
#define ERR_TYPE_TPCC_DBLIB   14
    //error from tpcc dblib txn module
#define ERR_TYPE_DELISRV      15
    //delivery server error
#define ERR_TYPE_TXNLOG       16
    //txn log error
#define ERR_TYPE_BCONN        17
    //Benchcraft connection class
#define ERR_TYPE_TPCC_CONN    18
    //Benchcraft connection class
#define ERR_TYPE_ENCINA       19
    //Encina error
#define ERR_TYPE_COMPONENT    20
    //error from COM component
#define ERR_TYPE RTE          21
    //Benchcraft rte
#define ERR_TYPE_AUTOMATION   22
    //Benchcraft automation errors
#define ERR_TYPE_DRIVER        23
    //Driver engine errors
#define ERR_TYPE RTE_BASE     24
    //Framework errors
#define ERR_BUF_OVERFLOW      25
    //Buffer overflow during receive
#define ERR_TYPE_SOAP_HTTP    26
    //HTTP/SOAP dll generated error
```

```
#define ERR_TYPE_OLEDB        27
    //OLE-DB generated error
#define ERR_TYPE_TPCC_OLEDB   28
    //error from tpcc ole-db txn module
// TPC-W error types
#define ERR_TYPE_TPCCW_CONN   50
    //Benchcraft connection class
#define ERR_TYPE_TPCCW_HTML   51
    //error from TpcwHtml dll
#define ERR_TYPE_TPCCW_USER   52
    //error from TPC-W user class
#define ERR_TYPE_TPCCW_ENG_BASE 53
#define ERR_TYPE_TPCCW_ENG_OS 54
#define ERR_TYPE_HTML_RESP    55
#define ERR_TYPE_TPCCW_ODBC   56
#define ERR_TYPE_SCHANNEL     57
#define ERR_TYPE_THINK_LIST   58
//----- end TPC-W -----
#define ERR_TYPE_XML_PROFILE   59
// TPC-E error types
#define ERR_TYPE_TPCE_CONN    60
    //TPC-E pipe connection errors
#define ERR_TYPE_TPCE RTE     61
    //TPC-E Rte errors
#define ERR_TYPE_TPCE_ENG_BASE 62
    //Tpce Driver engine errors
#define ERR_TYPE_TPCE_ENG_OS   63
    //Tpce Driver
    engine system errors
//#define ERR_TYPE_TPCE_MEE_ENG_BASE 64
    //Tpce MEE
    Driver engine errors
//#define ERR_TYPE_TPCE_MEE_ENG_OS 65
    //Tpce MEE
    Driver engine system errors
#define ERR_INS_MEMORY        "Insufficient Memory to continue."
#define ERR_UNKNOWN          "Unknown error."
#define ERR_MSG_BUF_SIZE     512
#define INV_ERROR_CODE       -1
#define ERR_INS_BUF_OVERFLOW "Insufficient Buffer
size to receive HTML pages."

class CBaseErr
{
public:
    enum Action
    {
        eNone = 0
    };
    CBaseErr(LPCTSTR szLoc = NULL)
    {}
};
```

```

        m_idMsg =
GetLastError(); //take the error code immediately
before it is reset by other
functions

        if (szLoc)
        {
            m_szLoc = new
char[strlen(szLoc)+1]*m_szLoc_size*/);
            strcpy(m_szLoc, szLoc);
        }
        else
            m_szLoc = NULL;

        m_szApp = new
char[m_szApp_size];

        GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
    }

    CBaseErr(int idMsg, LPCTSTR szLoc = NULL)
    {
        m_idMsg = idMsg;

        if (szLoc)
        {
            m_szLoc = new
char[strlen(szLoc)+1]*m_szLoc_size*/);
            strcpy(m_szLoc, szLoc);
        }
        else
            m_szLoc = NULL;

        m_szApp = new
char[m_szApp_size];

        GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
    }

    virtual ~CBaseErr(void)
    {
        if (m_szApp)
            delete [] m_szApp;
        if (m_szLoc)
            delete [] m_szLoc;
    };

    virtual void Draw(HWND hwnd, LPCTSTR szStr =
NULL)
    {
        int j = 0;
        char szTmp[512];

        if (szStr)
            j = sprintf(szTmp,
"%s\n",szStr);
        if (ErrorNum() != INV_ERROR_CODE)
            j += sprintf(szTmp+j,
"Error = %d\n", ErrorNum());
        if (m_szLoc)
            j += sprintf(szTmp+j,
"Location = %s\n", GetLocation());
    }

```

```

        j += sprintf(szTmp+j, "%s\n",
ErrorText());
        MessageBox(hwnd, szTmp, m_szApp,
MB_OK);
    }

    char *GetApp(void) { return m_szApp; }
    char *GetLocation(void) { return m_szLoc; }
    virtual int ErrorNum() { return m_idMsg; }

    virtual int ErrorType() = 0; // a value
which distinguishes the kind of error that occurred
virtual char *ErrorTypeStr() = 0; // text
representation of the error type
virtual char *ErrorText() = 0; // a string
(i.e., human readable) representation of the error
virtual int ErrorAction() { return eNone; }
// the function call that caused the error

protected:
    char *m_szApp;
    char *m_szLoc; // code location where
the error occurred
    int m_idMsg;

    //short m_errType;

class CSocketErr : public CBaseErr
{
public:
    enum Action
    {
        eNone = 0,
        eSend,
        eSocket,
        eBind,
        eConnect,
        eListen,
        eHost,
        eRecv,
        eGetHostByName,
        eWSACreateEvent,
        eWSASend,
        eWSAGetOverlappedResult,
        eWSARecv,
        eWSAWaitForMultipleEvents,
        eWSAStartup,
        eWSAResetEvent,
        eWSAEnumNetworkEvents,
        eWSAEventSelect,
        eSelect,
        eAccept,
        eNonRetryable
    };

    CSocketErr(Action eAction, LPCTSTR szLocation
= NULL);

    ~CSocketErr()
    {
        if (m_szErrorText != NULL)
            delete [] m_szErrorText;
    };

    Action m_eAction;
    char *m_szErrorText;

```

```

        int ErrorType() { return
ERR_TYPE_SOCKET};
        char* ErrorTypeStr() { return "SOCKET"; }
        char* ErrorText(void);
        int ErrorAction() { return
(int)m_eAction; }
    };

class CSystemErr : public CBaseErr
{
public:
    enum Action
    {
        eNone = 0,
        eTransactNamedPipe,
        eWaitNamedPipe,
        eSetNamedPipeHandleState,
        eCreateFile,
        eCreateProcess,
        eCallNamedPipe,
        eCreateEvent,
        eCreateThread,
        eVirtualAlloc,
        eReadFile = 10,
        eWriteFile,
        eMapViewOfFile,
        eCreateFileMapping,
        eInitializeSecurityDescriptor,
        eSetSecurityDescriptorDacl,
        eCreateNamedPipe,
        eConnectNamedPipe,
        eWaitForSingleObject,
        eRegOpenKeyEx,
        eRegQueryValueEx = 20,
        eBeginThread,
        eRegEnumValue,
        eRegSetValueEx,
        eRegCreateKeyEx,
        eWaitForMultipleObjects,
        eRegisterClassEx,
        eCreateWindow,
        eCreateSemaphore,
        eReleaseSemaphore,
        eFSeek,
        eFRead,
        eFWrite,
        eTmpFile,
        eSetFilePointer,
        eNew,
        eCloseHandle,
        eGetOverlappedResult
    };

    CSystemErr(Action
eAction, LPCTSTR szLocation);
    CSystemErr(int iError,
Action eAction, LPCTSTR szLocation);
    int ErrorType() { return
ERR_TYPE_OS};
    char* ErrorTypeStr() { return "SYSTEM"; }
    char* ErrorText(void);
    int ErrorAction() { return
(int)m_eAction; }
    void Draw(HWND hwnd, LPCTSTR szStr =
NULL);

    Action m_eAction;

private:
    char m_szMsg[ERR_MSG_BUF_SIZE];
};

```

```

class CMemoryErr : public CBaseErr
{
public:
    CMemoryErr();

    int         ErrorType() {return
ERR_TYPE_MEMORY;}
    char*       ErrorTypeStr() { return "OUT OF
MEMORY"; }
    char*       ErrorText() {return
ERR_INS_MEMORY;}
};

class CBufferOverflowErr : public CBaseErr
{
public:
    CBufferOverflowErr(int,LPTSTR);

    int         ErrorType() {return
ERR_BUF_OVERFLOW;}
    char*       ErrorTypeStr() { return "BUFFER
OVERFLOW"; }
    char*       ErrorText() {return
ERR_INS_BUF_OVERFLOW;}
};

// Exception type for XML profiles
class CXMLProfileErr : public CBaseErr
{
public:
    enum Action
    {
        LoadProfile = 1,
        LoadSchema,
        ValidateProfile,
        SaveProfile,
        LoadFromXML,
        SaveToXML,

        ApplyProcessingInstruction,
        ApplyAttribute,
        ApplyNode
    };

    CXMLProfileErr(Action eAction, int
eCode, LPCTSTR szLocation)
    {
        m_eAction = eAction;
        m_eCode = eCode;
        m_bOverload = true;
    };

    CXMLProfileErr(Action eAction, int
eCode, LPCTSTR szLocation, char * szMsg)
    {
        m_eAction = eAction;
        m_eCode = eCode;
        strcpy(m_szMsg, szMsg);
        m_bOverload = false;
    };

    virtual int
ErrorType() { return ERR_TYPE_XML_PROFILE;};
    virtual char *ErrorTypeStr();
    virtual char *ErrorText();

    virtual int
ErrorCode() { return m_eCode; };
    int
ErrorAction() { return (int)m_eAction; }
};

```

```

//virtual void Draw(HWND hwnd,
LPCTSTR szStr = NULL)
{
private:
    char
m_szMsg[ERR_MSG_BUF_SIZE];
    LPCTSTR m_szLoc;
    int m_eCode;
    bool m_bOverload;
    Action m_eAction;
};

```

common/src/trans.h

```

/* FILE: TRANS.H
 * Microsoft TPC-C
 * Kit Ver. 4.42.000
 * Copyright
 * Microsoft, 2002
 * All Rights Reserved
 * Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 * PURPOSE: Header file for TPC-C structure
 * templates.
 * Change history:
 * 4.42.000 - changed w_id fields from
short to long to support >32K warehouses
 * 4.20.000 - updated rev number to
match kit
 */
#pragma once

// String length constants
#define SERVER_NAME_LEN 20
#define DATABASE_NAME_LEN 20
#define USER_NAME_LEN 20
#define PASSWORD_LEN 20
#define TABLE_NAME_LEN 20
#define I_DATA_LEN 50
#define I_NAME_LEN 24
#define BRAND_LEN 1
#define LAST_NAME_LEN 16
#define W_NAME_LEN 10
#define ADDRESS_LEN 20
#define STATE_LEN 2
#define ZIP_LEN 9
#define S_DIST_LEN 24
#define S_DATA_LEN 50
#define D_NAME_LEN 10
#define FIRST_NAME_LEN 16
#define MIDDLE_NAME_LEN 2
#define PHONE_LEN 16
#define DATETIME_LEN 30
#define CREDIT_LEN 2
#define C_DATA_LEN 250
#define H_DATA_LEN 24
#define DIST_INFO_LEN 24
#define MAX_OL_NEW_ORDER_ITEMS 15
#define MAX_OL_ORDER_STATUS_ITEMS 15
#define STATUS_LEN 25

```

```

#define OL_DIST_INFO_LEN 24

// TIMESTAMP_STRUCT is provided by the ODBC header file
sqltypes.h, but is not available
// when compiling with dblink, so redefined here. Note:
we are using the symbol "__SQLTYPES"
// (declared in sqltypes.h) as a way to determine if
TIMESTAMP_STRUCT has been declared.
#ifdef __SQLTYPES
typedef struct
{
    /* SQLSMALLINT */ short
    year; unsigned short /*
SQLUSMALLINT */ month; unsigned short /*
SQLUSMALLINT */ day; unsigned short /*
SQLUSMALLINT */ hour; unsigned short /*
SQLUSMALLINT */ minute; unsigned short /*
SQLUSMALLINT */ second; unsigned long /*
SQLINTEGER */ fraction;
} TIMESTAMP_STRUCT;
#endif

// possible values for exec_status_code after
transaction completes
enum EXEC_STATUS
{
    eOK, // 0
    "Transaction committed."
    eInvalidItem, // 1 "Item number is
not valid."
    eDeliveryFailed // 2 "Delivery Post
Failed."
};

// transaction structures
typedef struct
{
    // input params
    long
ol_supply_w_id;
    long
ol_i_id;
    short
ol_quantity;

    // output params
    char
ol_i_name[I_NAME_LEN+1];
    char
ol_brand_generic[BRAND_LEN+1];
    double
ol_i_price;
    double
ol_amount;
    short
ol_stock;
} OL_NEW_ORDER_DATA;

typedef struct
{
    // input params
    long w_id;
    short d_id;
    long c_id;
    short o_ol_cnt;
};

```

```

// output params
EXEC_STATUS
exec_status_code;
char
char c_last[LAST_NAME_LEN+1];
char
double c_credit[CREDIT_LEN+1];
double
double w_tax;
double
double d_tax;
long
short o_id;
short
o_commit_flag;
TIMESTAMP_STRUCT o_entry_d;
short
short o_all_local;
double
double total_amount;
OL_NEW_ORDER_DATA
OL[MAX_OL_NEW_ORDER_ITEMS];
} NEW_ORDER_DATA, *PNEW_ORDER_DATA;

typedef struct
{
// input params
long
w_id;
short
d_id;
long
c_id;
short
c_d_id;
long
c_w_id;
double
h_amount;
char
c_last[LAST_NAME_LEN+1];
// output params
EXEC_STATUS
exec_status_code;
TIMESTAMP_STRUCT h_date;
char
w_street_1[ADDRESS_LEN+1];
char
w_street_2[ADDRESS_LEN+1];
char
w_city[ADDRESS_LEN+1];
char
w_state[STATE_LEN+1];
char
w_zip[ZIP_LEN+1];
char
d_street_1[ADDRESS_LEN+1];
char
d_street_2[ADDRESS_LEN+1];
char
d_city[ADDRESS_LEN+1];
char
d_state[STATE_LEN+1];
char
d_zip[ZIP_LEN+1];
char
c_first[FIRST_NAME_LEN+1];
char
c_middle[MIDDLE_NAME_LEN + 1];
char
c_street_1[ADDRESS_LEN+1];
char
c_street_2[ADDRESS_LEN+1];
char
c_city[ADDRESS_LEN+1];
char
c_state[STATE_LEN+1];

```

```

char
c_zip[ZIP_LEN+1];
char
c_phone[PHONE_LEN+1];
TIMESTAMP_STRUCT c_since;
char
c_credit[CREDIT_LEN+1];
double
c_credit_lim;
double
c_discount;
double
c_balance;
char
c_data[200+1];
} PAYMENT_DATA, *PPAYMENT_DATA;

typedef struct
{
long
ol_i_id;
long
short ol_supply_w_id;
double
ol_quantity;
double
ol_amount;
TIMESTAMP_STRUCT ol_delivery_d;
} OL_ORDER_STATUS_DATA;

typedef struct
{
// input params
long
short
long
char
w_id;
d_id;
c_id;
c_last[LAST_NAME_LEN+1];
// output params
EXEC_STATUS
exec_status_code;
char
c_first[FIRST_NAME_LEN+1];
char
c_middle[MIDDLE_NAME_LEN+1];
double
long
TIMESTAMP_STRUCT
short
OL_ORDER_STATUS_DATA
OL[MAX_OL_ORDER_STATUS_ITEMS];
short
} ORDER_STATUS_DATA, *PORDER_STATUS_DATA;

typedef struct
{
// input params
long
short
w_id;
o_carrier_id;
// output params
EXEC_STATUS
exec_status_code;
SYSTEMTIME
long
o_id[10];
orders for districts 1 to 10
} DELIVERY_DATA, *PDELIVERY_DATA;

//This structure is used for posting delivery
transactions and for writing them to the delivery
server.
typedef struct _DELIVERY_TRANSACTION
{

```

```

SYSTEMTIME
queue;
//time delivery transaction queued
long
w_id;
//delivery warehouse
short
short
//carrier id
o_carrier_id;
} DELIVERY_TRANSACTION;

typedef struct
{
// input params
long
short
short
short
threshold;
w_id;
d_id;
// output params
EXEC_STATUS
exec_status_code;
long
low_stock;
} STOCK_LEVEL_DATA, *PSTOCK_LEVEL_DATA;

```

common/src/txn_base.h

```

/*
 * FILE: TXN_BASE.H
 * Microsoft TPC-C
 * Kit Ver. 4.20.000
 * Copyright
 * Microsoft, 1999
 * All Rights Reserved
 *
 * Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 *
 * PURPOSE: Header file for TPC-C txn class
 * implementation.
 *
 * Change history:
 * 4.20.000 - updated rev number to
 * match kit
 */

#pragma once

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class DllDecl CTPCC_BASE
{
public:
CTPCC_BASE(void) {};
virtual ~CTPCC_BASE(void) {};

virtual PNEW_ORDER_DATA
BuffAddr_NewOrder() = 0;
virtual PPAYMENT_DATA
BuffAddr_Payment() = 0;
virtual PDELIVERY_DATA
BuffAddr_Delivery() = 0;
virtual PSTOCK_LEVEL_DATA
BuffAddr_StockLevel() = 0;

```



```

    virtual PORDER_STATUS_DATA
    BuffAddr_OrderStatus() = 0;

    virtual void NewOrder
    () = 0;

    virtual void Payment
    () = 0;

    virtual void Delivery
    () = 0;

    virtual void StockLevel
    () = 0;

    virtual void OrderStatus
    () =
0;
};

```

db_dblib_dll/src/tpcc_dblib.cpp

```

/*      FILE:          TPCC_DBLIB.CPP
 *      Microsoft TPC-C
 *      Kit Ver. 4.42.000
 *      Copyright
 *      Microsoft, 2002
 *      All Rights Reserved
 *      Version
 *      4.10.000 audited by Richard Gimarc, Performance
 *      Metrics, 3/17/99
 *      PURPOSE:  Implements dblib calls for TPC-C
 *      txns.
 *      Contact:  Charles Levine
 *      (clevine@microsoft.com)
 *      Change history:
 *      4.42.000 - changed w_id fields from
 *      short to long to support >32K warehouses
 *      4.20.000 - updated rev number to
 *      match kit
 *      4.10.001 - not deleting error class
 *      in catch handler on deadlock retry;
 *      not a
 *      functional bug, but a memory leak
 *      - had to tweak
 *      some declarations to compile with latest SDK; no
 *      functional change
 */

#include <windows.h>
#include <stdio.h>
#include <assert.h>

#define DBNTWIN32
#include <sqlfront.h>
#include <sqldb.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl __declspec( dllexport )

#include "..\..\common\src\error.h"
#include "..\..\common\src\trans.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_dblib.h"

```

```

#define DEFCLPACKSIZE          4096

// version string; must match return value from
tpcc_version stored proc
const char          sVersion[] = "4.20.000";

const          iMaxRetries = 10;
// how many retries on deadlock
static long      iConnectionCount = 0; // number of
current dblib connections

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

BOOL WINAPI DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
    switch( ul_reason_for_call )
    {
        case DLL_PROCESS_ATTACH:
            DisableThreadLibraryCalls(hModule);
            dbinit(); //
        initialize dblib          break;

        case DLL_PROCESS_DETACH:
            dbexit(); //
        close all dblib structures/connections
            break;

        default: /* nothing */;
    }
    return TRUE;
}

int err_handler(DBPROCESS *dbproc, int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
    CTPCC_DBLIB
    *pConn;

    assert(dbproc != NULL);
    pConn = (CTPCC_DBLIB*)dbgetuserdata(dbproc);

    if (pConn != NULL)
    {
        pConn->SetDbLibError( severity,
        dberr, oserr, dberrstr, oserrstr );
    }
    return INT_CANCEL;
}

/* FUNCTION: int msg_handler(DBPROCESS *dbproc, DBINT
msgno, int msgstate, int severity, char *msgtext)
 *
 * PURPOSE:          This function handles DB-Library
 * SQL Server error messages
 *
 * ARGUMENTS:        DBPROCESS          *dbproc
 *                   DBPROCESS id pointer
 *                   DBINT
 *                   msgno
 *                   message number
 *                   int
 *                   msgstate
 *                   message state
 *                   int
 *                   severity
 *                   message severity

```

```

 *                   char
 *                   msgtext
 *                   printable
message description
 *
 * RETURNS:          int
 *                   INT_CONTINUE continue if
 * error is SQLETIME else INT_CANCEL action
 *
 *                   INT_CANCEL
 *                   cancel operation
 *
 * COMMENTS:        This function also sets the dead
 * lock dbproc variable if necessary.
 *
 */

// typedef INT (SQLAPI *DBMSGHANDLE_PROC)(PDBPROCESS,
DBINT, INT, INT, LPCSTR, LPCSTR, LPCSTR, DBUSMALLINT);

int msg_handler(DBPROCESS *dbproc, DBINT msgno, int
msgstate, int severity,
LPCSTR srvname, LPCSTR procname, DBUSMALLINT line)
{
    CTPCC_DBLIB
    *pConn;

    assert(dbproc != NULL);
    pConn = (CTPCC_DBLIB*)dbgetuserdata(dbproc);

    if (pConn != NULL)
    {
        pConn->SetSqlError( msgno,
        msgstate, severity, msgtext );
    }

    return 0;
}

/* FUNCTION: void UtilStrCpy(char * pDest, char * pSrc,
int n)
 *
 * PURPOSE:          This function copies n characters
 * from string pSrc to pDst and places a
 * null character at the end
 * of the destination string.
 *
 * ARGUMENTS:        char
 *                   *pDest destination string pointer
 *                   char
 *                   *pSrc source string pointer
 *                   int
 *                   n
 *                   number of characters to copy
 *
 * RETURNS:          None
 *
 * COMMENTS:        Unlike strncpy this function
 * ensures that the result string is
 * always null
 * terminated.
 *
 */

inline static void UtilStrCpy(char * pDest, const BYTE
*pSrc, int n)
{
    strncpy(pDest, (char *)pSrc, n);
    pDest[n] = '\0';

    return;
}

```

```

/* FUNCTION: CTPCC_DBLIB_ERR::ErrorText
 *
 */
char* CTPCC_DBLIB_ERR::ErrorText(void)
{
    int i;

    static SERRORMSG errorMsgs[] =
    {
        { ERR_WRONG_SP_VERSION,
        "Wrong version of stored procs on database
server" },
        { ERR_INVALID_CUST,
        "Invalid Customer id,name."
        },
        { ERR_NO_SUCH_ORDER,
        "No orders found for customer."
        },
        { ERR_RETRIED_TRANS,
        "Retries before transaction succeeded."
        },
        { 0, ""
        }
    };

    static char szNotFound[] = "Unknown error
number.";

    for(i=0; errorMsgs[i].szMsg[0]; i++)
    {
        if ( m_errno == errorMsgs[i].iError
        )
            break;
    }
    if ( !errorMsgs[i].szMsg[0] )
        return szNotFound;
    else
        return errorMsgs[i].szMsg;
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_DBLIB* CTPCC_DBLIB_new(
LPCSTR szServer, // name of SQL
server
LPCSTR szUser, //
user name for login
LPCSTR szPassword, // password for
login
LPCSTR szHost, //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL
Server
LPCSTR szDatabase ) // name of
database to use
{
    return new CTPCC_DBLIB( szServer, szUser,
szPassword, szHost, szDatabase );
}

CTPCC_DBLIB::CTPCC_DBLIB (
LPCSTR szServer, // name of SQL
server

```

```

LPCSTR szUser, //
user name for login
LPCSTR szPassword, // password for
login
LPCSTR szHost, //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL
Server
LPCSTR szDatabase ) // name of
database to use
{
    LOGINREC *login;
    const BYTE *pData;

    // initialization
    m_dbproc = NULL;
    m_DbLibErr = (CDBLIBERR*)NULL;
    m_SqlErr = (CSQLERR*)NULL;

    m_MaxRetries = 10; // how many
retries on deadlock

    // increase max number of connections if
getting close
    if ( dbgetmaxprocs() < (iConnectionCount+5) )
    {
        if (
dbsetmaxprocs(iConnectionCount+10) == FAIL )
            ThrowError(CDBLIBERR::eDbSetMaxProcs);
    }

    // allocate a login structure
    login = dblogin();
    if (login == NULL)
        ThrowError(CDBLIBERR::eLogin);
    InterlockedIncrement( &iConnectionCount );

    // register error and message handler
    functions if (dbprocerrhandle(login, err_handler) ==
NULL)
        ThrowError(CDBLIBERR::eDbProcHandler);

    if (dbprocmsghandle(login, msg_handler) ==
NULL)
        ThrowError(CDBLIBERR::eDbProcHandler);

    DBSETUSER(login, szUser);
    DBSETPWD(login, szPassword);
    DBSETLHOST(login, szHost);
    DBSETLPACKET(login, (unsigned
short)DEFCLPACKSIZE);
    DBSETLVERSION(login, DBVER60);
    // use dblink ver 6.0 client behavior

    // set time to wait for login
    if (dbsetlogintime(60) == FAIL)
        ThrowError(CDBLIBERR::eDbSet);

    // set time to wait for statement execution
    if (dbsettime(180) == FAIL)
        ThrowError(CDBLIBERR::eDbSet);

    m_dbproc = dbopen(login, szServer);

    // deallocate login structure before checking
for success

```

```

dbfreelogin( login );

if (m_dbproc == NULL)
    ThrowError(CDBLIBERR::eDbOpen);

// save address of class instance so that the
message and error handler
// can get to data.
dbsetuserdata(m_dbproc, (LPVOID)this);

// Use the the right database
if (dbuse(m_dbproc, szDatabase) == FAIL)
    ThrowError(CDBLIBERR::eDbUse);

dbcmd(m_dbproc, "set nocount on ");
// do not return row counts
dbcmd(m_dbproc, "set XACT_ABORT ON");
// rollback transaction on abort

if (dbsqlexec(m_dbproc) == FAIL)
    ThrowError(CDBLIBERR::eDbSqlExec);

DiscardNextResults(2);

// verify that version of stored procs on
server is correct
dbrpcinit(m_dbproc, "tpcc_version", 0);

if (dbrpcexec(m_dbproc) == FAIL)
    ThrowError(CDBLIBERR::eDbRpcExec);

if (dbresults(m_dbproc) != SUCCEEDED)
    ThrowError(CDBLIBERR::eDbResults);

if (dbnextrow(m_dbproc) != REG_ROW)
    ThrowError(CDBLIBERR::eDbNextRow);

char szSrvVersion[16];
pData=dbdata(m_dbproc, 1);
if (pData)
    UtilStrCpy(szSrvVersion, pData,
dbdatlen(m_dbproc, 1));
else
    szSrvVersion[0]=0;
if (strcmp(szSrvVersion,sVersion))
    throw new CTPCC_DBLIB_ERR(
CTPCC_DBLIB_ERR::ERR_WRONG_SP_VERSION );

DiscardNextRows(0);
DiscardNextResults(0);
}

CTPCC_DBLIB::~CTPCC_DBLIB( void )
{
    // close db connection and deallocate
resources
    dbclose(m_dbproc);
    InterlockedDecrement( &iConnectionCount );
    if (m_DbLibErr != NULL)
        delete m_DbLibErr;
    if (m_SqlErr != NULL)
        delete m_SqlErr;
}

void CTPCC_DBLIB::SetDbLibError(int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
    delete m_DbLibErr;
    m_DbLibErr = new
CDBLIBERR(CDBLIBERR::eUnknown, severity, dberr, oserr);
}

```

```

        if (dberrstr != NULL)
        {
            m_DbLibErr->m_dberrstr = new char[
                strlen(dberrstr)+1 ];
            strcpy( m_DbLibErr->m_dberrstr,
                dberrstr );
        }

        if (oserrstr != NULL)
        {
            m_DbLibErr->m_oserrstr = new char[
                strlen(oserrstr)+1 ];
            strcpy( m_DbLibErr->m_oserrstr,
                oserrstr );
        }
    }

void CTPCC_DBLIB::SetSqlError( int /*DBINT*/ msgno, int
    msgstate, int severity, LPCSTR msgtext )
{
    if (m_SqlErr == NULL)
        m_SqlErr = new CSQLERR();

    m_SqlErr->m_msgno = msgno;
    m_SqlErr->m_msgstate = msgstate;
    m_SqlErr->m_severity = severity;

    delete [] m_SqlErr->m_msgtext;
    if (msgtext != NULL)
    {
        m_SqlErr->m_msgtext = new char[
            strlen(msgtext)+1 ];
        strcpy( m_SqlErr->m_msgtext,
            msgtext );
    }
}

void CTPCC_DBLIB::ThrowError( CDBLIBERR::ACTION eAction
    )
{
    // discard anything still in return buffer
    DiscardNextRows(-1);
    DiscardNextResults(-1);

    // check for SQL Server error first; if yes,
    throw it and ignore any DBLib error.
    if (m_SqlErr != NULL)
    {
        CSQLERR *pSqlErr;
        pSqlErr = m_SqlErr;
        m_SqlErr = NULL; // clear our
        pointer to instance; catch handler will delete
        throw pSqlErr;
    }

    CDBLIBERR *pDbLibErr;
    if (m_DbLibErr == NULL)
        // this case isn't expected to
        happen, since it means that an error was returned
        // but the error handlers were not
        called.
        pDbLibErr = new CDBLIBERR(eAction);
    else
    {
        pDbLibErr = m_DbLibErr;
        pDbLibErr->m_eAction = eAction;
        m_DbLibErr = NULL; //
        clear our pointer to instance; catch handler will
        delete
    }
}

```

```

        throw pDbLibErr;
    }

    // Read and discard rows until no more. Throw an
    exception if number of rows read doesn't
    // match number of rows expected. The row count will
    be ignored if the expected count value
    // passed in is negative. A typical use of this
    routine is to verify that there are no more
    // rows to be read.
    void CTPCC_DBLIB::DiscardNextRows(int iExpectedCount)
    {
        int          iRowsRead = 0;
        RETCODE      rc;

        while (TRUE)
        {
            rc = dbnextrow(m_dbproc);
            if (rc == NO_MORE_ROWS)
                break;
            if (rc == FAIL)
            {
                if (iExpectedCount >= 0)
                    ThrowError(CDBLIBERR::eDbNextRow);
                else
                    break;
            }
            iRowsRead++;
        }

        if ((iExpectedCount >= 0) &&
            (iExpectedCount != iRowsRead))
            ThrowError(CDBLIBERR::eWrongRowCount);
    }

    // Read and discard results until no more. Throw an
    exception if number of result sets read doesn't
    // match number expected. The result set count will be
    ignored if the expected count value
    // passed in is negative. A typical use of this
    routine is to verify that there are no more
    // result sets to be read.
    void CTPCC_DBLIB::DiscardNextResults(int
        iExpectedCount)
    {
        int          iResultsRead = 0;
        RETCODE      rc;

        while (TRUE)
        {
            rc = dbresults(m_dbproc);
            if (rc == NO_MORE_RESULTS)
                break;
            if (rc == FAIL)
            {
                if (iExpectedCount >= 0)
                    ThrowError(CDBLIBERR::eDbResults);
                else
                    break;
            }

            DiscardNextRows(-1);
            iResultsRead++;
        }

        if ((iExpectedCount >= 0) &&
            (iExpectedCount != iResultsRead))

```

```

        ThrowError(CDBLIBERR::eWrongRowCount);
    }

void CTPCC_DBLIB::StockLevel()
{
    int          iTryCount = 0;
    const BYTE   *pData;

    ResetError();

    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
                "tpcc_stocklevel", 0);

            dbrpcparam(m_dbproc,
                NULL, 0, SQLINT4, -1, -1, (BYTE *)
                &m_txn.StockLevel.w_id); //

            @w_id int          dbrpcparam(m_dbproc,
                NULL, 0, SQLINT1, -1, -1, (BYTE *)
                &m_txn.StockLevel.d_id); //

            @d_id tinyint      dbrpcparam(m_dbproc,
                NULL, 0, SQLINT2, -1, -1, (BYTE *)
                &m_txn.StockLevel.threshold); //

            @threshold smallint

            if (dbrpcexec(m_dbproc)
                == FAIL)
                ThrowError(CDBLIBERR::eDbRpcExec);

            if (dbresults(m_dbproc)
                != SUCCEEDED)
                ThrowError(CDBLIBERR::eDbResults);

            if (dbnextrow(m_dbproc)
                != REG_ROW)
                ThrowError(CDBLIBERR::eDbNextRow);

            if
                (pData=dbdata(m_dbproc, 1))
                m_txn.StockLevel.low_stock = *((long *)
                    pData);

            DiscardNextRows(0);
            DiscardNextResults(0);

            m_txn.StockLevel.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
                ||
                (e->m_msgno ==
                    iErrOLEDBProvider &&
                    >m_msgtext, sErrTimeoutExpired) != NULL)) &&
                (++iTryCount <=
                    iMaxRetries))

```

```

        {
            // hit
            deadlock; backoff for increasingly longer period
            delete e;
            Sleep(10 *
iTryCount);
        }
        else
            throw;
    }
    // while (TRUE)
    //if (iTryCount)
    //    throw new
    CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::NewOrder()
{
    int i;
    DBINT commit_flag;
    DBDATETIME datetime;
    DBDATEREC daterec;

    int iTryCount = 0;
    const BYTE *pData;

    ResetError();
    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
"tpcc_neworder", 0);

            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.NewOrder.w_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.d_id);

            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.NewOrder.c_id);

            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.o_ol_cnt);

            // check whether any
            order lines are for a remote warehouse
            m_txn.NewOrder.o_all_local = 1;
            for (i = 0; i <
m_txn.NewOrder.o_ol_cnt; i++)
            {
                if
(m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
                {
                    m_txn.NewOrder.o_all_local = 0; // at least
                    one remote warehouse
                    break;
                }
            }
        }
    }
}

```

```

        }
        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.o_all_local);
    }
    for (i = 0; i <
m_txn.NewOrder.o_ol_cnt; i++)
    {
        dbrpcparam(m_dbproc, NULL, 0, SQLINT4, -1, -
1, (BYTE *) &m_txn.NewOrder.OL[i].ol_i_id);
        dbrpcparam(m_dbproc, NULL, 0, SQLINT4, -1, -
1, (BYTE *) &m_txn.NewOrder.OL[i].ol_supply_w_id
);
        dbrpcparam(m_dbproc, NULL, 0, SQLINT2, -1, -
1, (BYTE *) &m_txn.NewOrder.OL[i].ol_quantity);
    }
    if (dbrpcexec(m_dbproc)
== FAIL)
        ThrowError(CDBLIBERR::eDbRpcExec);

    ThrowError(CDBLIBERR::eDbResults);

    // Get order line results
    m_txn.NewOrder.total_amount = 0;
    for (i = 0;
i < m_txn.NewOrder.o_ol_cnt; i++)
    {
        if
(dbresults(m_dbproc) != SUCCEEDED)
            ThrowError(CDBLIBERR::eDbResults);

        if
(dbnumcols(m_dbproc) != 5)
            ThrowError(CDBLIBERR::eWrongNumCols);

        if
(dbnextrow(m_dbproc) != REG_ROW)
            ThrowError(CDBLIBERR::eDbNextRow);

        if (pData=dbdata(m_dbproc, 1))
            UtilStrCpy(m_txn.NewOrder.OL[i].ol_i_name,
pData, dbdatlen(m_dbproc, 1));

        if (pData=dbdata(m_dbproc, 2))
            m_txn.NewOrder.OL[i].ol_stock = (*(DBSMALLINT
*) pData);

        if (pData=dbdata(m_dbproc, 3))
            UtilStrCpy(m_txn.NewOrder.OL[i].ol_brand_gene
ric, pData, dbdatlen(m_dbproc, 3));

        if (pData=dbdata(m_dbproc, 4))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,4),
SQLFLT8, (BYTE
*)&m_txn.NewOrder.OL[i].ol_i_price, 8);
    }
}

```

```

    if (pData=dbdata(m_dbproc, 5))
        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,5),
SQLFLT8, (BYTE
*)&m_txn.NewOrder.OL[i].ol_amount, 8);

    m_txn.NewOrder.total_amount =
m_txn.NewOrder.total_amount +
m_txn.NewOrder.OL[i].ol_amount;

    DiscardNextRows(0);
}

// get remaining values
for w_tax, d_tax, o_id, c_last, c_discount, c_credit,
o_entry_d, commit_flag
if (dbresults(m_dbproc)
!= SUCCEEDED)
    ThrowError(CDBLIBERR::eDbResults);

if (dbnextrow(m_dbproc)
!= REG_ROW)
    ThrowError(CDBLIBERR::eDbNextRow);

if (dbnumcols(m_dbproc)
!= 8)
    ThrowError(CDBLIBERR::eWrongNumCols);

if
(pData=dbdata(m_dbproc, 1))
    dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,1), SQLFLT8, (BYTE *)
&m_txn.NewOrder.w_tax, 8);
    if
(pData=dbdata(m_dbproc, 2))
        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,2), SQLFLT8, (BYTE *)
&m_txn.NewOrder.d_tax, 8);
    if
(pData=dbdata(m_dbproc, 3))
        m_txn.NewOrder.o_id = (*(DBINT *) pData);
    if
(pData=dbdata(m_dbproc, 4))
        UtilStrCpy(m_txn.NewOrder.c_last, pData,
dbdatlen(m_dbproc, 4));
    if
(pData=dbdata(m_dbproc, 5))
        dbconvert(m_dbproc, SQLNUMERIC,

```



```

        UtilStrCpy(m_txn.Payment.d_street_1, pData,
dbdatlen(m_dbproc, 9));
        if
(pData=dbdata(m_dbproc, 10))
            UtilStrCpy(m_txn.Payment.d_street_2, pData,
dbdatlen(m_dbproc, 10));
        if
(pData=dbdata(m_dbproc, 11))
            UtilStrCpy(m_txn.Payment.d_city, pData,
dbdatlen(m_dbproc, 11));
        if
(pData=dbdata(m_dbproc, 12))
            UtilStrCpy(m_txn.Payment.d_state, pData,
dbdatlen(m_dbproc, 12));
        if
(pData=dbdata(m_dbproc, 13))
            UtilStrCpy(m_txn.Payment.d_zip, pData,
dbdatlen(m_dbproc, 13));
        if
(pData=dbdata(m_dbproc, 14))
            UtilStrCpy(m_txn.Payment.c_first, pData,
dbdatlen(m_dbproc, 14));
        if
(pData=dbdata(m_dbproc, 15))
            UtilStrCpy(m_txn.Payment.c_middle, pData,
dbdatlen(m_dbproc, 15));
        if
(pData=dbdata(m_dbproc, 16))
            UtilStrCpy(m_txn.Payment.c_street_1, pData,
dbdatlen(m_dbproc, 16));
        if
(pData=dbdata(m_dbproc, 17))
            UtilStrCpy(m_txn.Payment.c_street_2, pData,
dbdatlen(m_dbproc, 17));
        if
(pData=dbdata(m_dbproc, 18))
            UtilStrCpy(m_txn.Payment.c_city, pData,
dbdatlen(m_dbproc, 18));
        if
(pData=dbdata(m_dbproc, 19))
            UtilStrCpy(m_txn.Payment.c_state, pData,
dbdatlen(m_dbproc, 19));
        if
(pData=dbdata(m_dbproc, 20))
            UtilStrCpy(m_txn.Payment.c_zip, pData,
dbdatlen(m_dbproc, 20));
        if
(pData=dbdata(m_dbproc, 21))
            UtilStrCpy(m_txn.Payment.c_phone, pData,
dbdatlen(m_dbproc, 21));
        if
(pData=dbdata(m_dbproc, 22))
        {
            datetime =
*((DBDATETIME *) pData);
            dbdatecrack(m_dbproc, &daterec, &datetime);
            m_txn.Payment.c_since.year = daterec.year;

```

```

        m_txn.Payment.c_since.month = daterec.month;
        m_txn.Payment.c_since.day = daterec.day;
        m_txn.Payment.c_since.hour = daterec.hour;
        m_txn.Payment.c_since.minute =
daterec.minute;
        m_txn.Payment.c_since.second =
daterec.second;
        }
        if(pData=dbdata(m_dbproc,
23))
            UtilStrCpy(m_txn.Payment.c_credit, pData,
dbdatlen(m_dbproc, 23));
        if(pData=dbdata(m_dbproc,
24))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,24), SQLFLT8, (BYTE
*))
            &m_txn.Payment.c_credit_lim, 8);
        if(pData=dbdata(m_dbproc,
25))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,25), SQLFLT8, (BYTE
*))
            &m_txn.Payment.c_discount, 8);
        if(pData=dbdata(m_dbproc,
26))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,26), SQLFLT8, (BYTE
*))
            &m_txn.Payment.c_balance, 8);
        if(pData=dbdata(m_dbproc,
27))
            UtilStrCpy(m_txn.Payment.c_data, pData,
dbdatlen(m_dbproc, 27));
            DiscardNextRows(0);
            DiscardNextResults(0);
            if (m_txn.Payment.c_id ==
0)
                throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_INVALID_CUST );
            else
                m_txn.Payment.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrOleDbProvider &&
strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))

```

```

        {
            // hit
            // deadlock; backoff for increasingly longer period
            // delete e;
            // Sleep(10 *
iTryCount);
        }
        else
            throw;
    }
    // while (TRUE)
}
// if (iTryCount)
// throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::OrderStatus()
{
    int
    DBDATETIME          datetime;
    DBDATETIME          daterec;
    int
    RETCODE              rc;
    const BYTE          *pData;
    iTryCount = 0;
    ResetError();
    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
"tpcc_orderstatus", 0);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.w_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.OrderStatus.d_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.c_id);
            // if customer id is
            // zero, then order status is by name
            if
(m_txn.OrderStatus.c_id == 0)
                dbrpcparam(m_dbproc, NULL, 0, SQLCHAR, -1,
strlen(m_txn.OrderStatus.c_last), (unsigned char
*)m_txn.OrderStatus.c_last);
            if (dbrpcexec(m_dbproc)
== FAIL)
                ThrowError(CDBLIBERR::eDbRpcExec);
            // Get order lines
            if (dbresults(m_dbproc)
{
                if ((m_DbLibErr
== NULL) && (m_SqlErr == NULL))

```

```

        throw
new CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_NO_SUCH_ORDER
);
        else
            ThrowError(CDBLIBERR::eDbResults);
    }
    if (dbnumcols(m_dbproc)
!= 5)
        ThrowError(CDBLIBERR::eWrongNumCols);
    i = 0;
    while (TRUE)
    {
        rc =
dbnextrow(m_dbproc);
        if (rc ==
NO_MORE_ROWS)
            break;
        if (rc !=
REG_ROW)
            ThrowError(CDBLIBERR::eDbNextRow);
        if (pData=dbdata(m_dbproc, 1))
            m_txn.OrderStatus.OL[i].ol_supply_w_id =
            (*(DBSMALLINT *) pData);
        if (pData=dbdata(m_dbproc, 2))
            m_txn.OrderStatus.OL[i].ol_i_id = (*(DBINT *)
pData);
        if (pData=dbdata(m_dbproc, 3))
            m_txn.OrderStatus.OL[i].ol_quantity =
            (*(DBSMALLINT *) pData);
        if (pData=dbdata(m_dbproc, 4))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,4),
SQLFLT8, (BYTE
*)&m_txn.OrderStatus.OL[i].ol_amount, 8);
        if (pData=dbdata(m_dbproc, 5))
        {
            datetime = *((DBDATETIME *) pData);
            dbdatecrack(m_dbproc, &daterec, &datetime);
            m_txn.OrderStatus.OL[i].ol_delivery_d.year
= daterec.year;
            m_txn.OrderStatus.OL[i].ol_delivery_d.month
= daterec.month;
            m_txn.OrderStatus.OL[i].ol_delivery_d.day
= daterec.day;
            m_txn.OrderStatus.OL[i].ol_delivery_d.hour
= daterec.hour;
            m_txn.OrderStatus.OL[i].ol_delivery_d.minute
= daterec.minute;

```

```

            m_txn.OrderStatus.OL[i].ol_delivery_d.second
= daterec.second;
        }
        i++;
    }
    m_txn.OrderStatus.o_ol_cnt = i;
    if (dbresults(m_dbproc)
!= SUCCEED)
        ThrowError(CDBLIBERR::eDbResults);
    if (dbnextrow(m_dbproc)
!= REG_ROW)
        ThrowError(CDBLIBERR::eDbNextRow);
    if (dbnumcols(m_dbproc)
!= 8)
        ThrowError(CDBLIBERR::eWrongNumCols);
    if (pData=dbdata(m_dbproc,
1))
        m_txn.OrderStatus.c_id = (*(DBINT *) pData);
    if (pData=dbdata(m_dbproc,
2))
        UtilStrCpy(m_txn.OrderStatus.c_last, pData,
dbdatlen(m_dbproc,2));
    if (pData=dbdata(m_dbproc,
3))
        UtilStrCpy(m_txn.OrderStatus.c_first, pData,
dbdatlen(m_dbproc,3));
    if (pData=dbdata(m_dbproc,
4))
        UtilStrCpy(m_txn.OrderStatus.c_middle, pData,
dbdatlen(m_dbproc, 4));
    if (pData=dbdata(m_dbproc,
5))
    {
        datetime =
*((DBDATETIME *) pData);
        dbdatecrack(m_dbproc, &daterec, &datetime);
        m_txn.OrderStatus.o_entry_d.year =
daterec.year;
        m_txn.OrderStatus.o_entry_d.month =
daterec.month;
        m_txn.OrderStatus.o_entry_d.day =
daterec.day;
        m_txn.OrderStatus.o_entry_d.hour =
daterec.hour;
        m_txn.OrderStatus.o_entry_d.minute =
daterec.minute;
        m_txn.OrderStatus.o_entry_d.second =
daterec.second;
    }

```

```

        if (pData=dbdata(m_dbproc,
6))
            m_txn.OrderStatus.o_carrier_id =
            (*(DBSMALLINT *) pData);
        if (pData=dbdata(m_dbproc,
7))
            dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,7),
SQLFLT8, (BYTE
*)&m_txn.OrderStatus.c_balance, 8);
        if (pData=dbdata(m_dbproc,
8))
            m_txn.OrderStatus.o_id = (*(DBINT *) pData);
            DiscardNextRows(0);
            DiscardNextResults(0);
            if
(m_txn.OrderStatus.o_ol_cnt == 0)
                throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_NO_SUCH_ORDER );
            else if
(m_txn.OrderStatus.c_id == 0 &&
m_txn.OrderStatus.c_last[0] == 0)
                throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_INVALID_CUST );
            else
                m_txn.OrderStatus.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrOleDbProvider &&
strstr(e->m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))
            {
                // hit
                deadlock; backoff for increasingly longer period
                delete e;
                Sleep(10 *
iTryCount);
            }
            else
                throw;
        }
        // while (TRUE)
        // if (iTryCount)
        // throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
    }
    void CTPCC_DBLIB::Delivery()
    {
        int i;
        int iTryCount = 0;
        const BYTE *pData;

```

```

ResetError();
while (TRUE)
{
    try
    {
        dbrpcinit(m_dbproc,
"tpcc_delivery", 0);
        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Delivery.w_id);
        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Delivery.o_carrier_id);
        if (dbrpcexec(m_dbproc)
== FAIL)
            ThrowError(CDBLIBERR::eDbRpcExec);
        if (dbresults(m_dbproc)
!= SUCCEEDED)
            ThrowError(CDBLIBERR::eDbResults);
        if (dbnextrow(m_dbproc)
!= REG_ROW)
            ThrowError(CDBLIBERR::eDbNextRow);
        if (dbnumcols(m_dbproc)
!= 10)
            ThrowError(CDBLIBERR::eWrongNumCols);
        for (i=0; i<10; i++)
        {
            if (pData =
dbdata(m_dbproc, i+1))
                m_txn.Delivery.o_id[i] = *((DBINT *)pData);
            DiscardNextRows(0);
            DiscardNextResults(0);
            m_txn.Delivery.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrOleDbProvider &&
strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))
            {
                // hit
                deadlock; backoff for increasingly longer period
                delete e;
                Sleep(10 *
iTryCount);
            }
            else
                throw;
        }
    }
} // while (TRUE)

```

```

//      if (iTryCount)
//          throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::ResetError()
{
    if (m_DbLibErr != NULL)
    {
        delete m_DbLibErr;
        m_DbLibErr = (CDBLIBERR*)NULL;
    }
    if (m_SqlErr != NULL)
    {
        delete m_SqlErr;
        m_SqlErr = (CSQLERR*)NULL;
    }
    return;
}

```

db_dblib_dll/src/tpcc_dblib.h

```

/*      FILE:          TPC_C_DBLIB.H
*          Microsoft TPC-C
Kit Ver. 4.20.000
*          Copyright
Microsoft, 1999
*          All Rights Reserved
*
*          Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
*
*      PURPOSE:  Header file for TPC-C txn class
implementation.
*      Change history:
*          4.20.000 - updated rev number to
match kit
*/
#pragma once
#ifdef PDBPROCESS
#define DBPROCESS void // dbprocess structure type
typedef DBPROCESS * PDBPROCESS;
#endif

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class CSQLERR : public CBaseErr
{
public:
    CSQLERR(void)
    {
        m_msgno = 0;
        m_msgstate = 0;
        m_severity = 0;
        m_msgtext = NULL;
    }
};

```

```

};
~CSQLERR()
{
    delete [] m_msgtext;
};
int m_msgno;
int m_msgstate;
int m_severity;
char *m_msgtext;
int ErrorType()
{return ERR_TYPE_SQL;};
char* ErrorTypeStr() { return
"SQL"; };
int ErrorNum()
{return m_msgno;};
char* ErrorText() {return
m_msgtext;};
};

class CDBLIBERR : public CBaseErr
{
public:
    enum ACTION
    {
        eNone,
        eUnknown,
        eLogin,
        // error from dblogin
        eDbOpen,
        // error from dbopen
        eDbUse,
        // error from dbuse
        eDbSqlExec,
        // error from dbsqlxec
        eDbSet,
        // error from one of the dbset*
        routines
        eDbNextRow,
        // error from dbnextrow
        eWrongRowCount,
        // more or less rows returned than expected
        eWrongNumCols,
        // more or less columns returned than
        expected
        eDbResults,
        // error from dbresults
        eDbRpcExec,
        // error from dbrpcexec
        eDbSetMaxProcs,
        // error from dbsetmaxprocs
        eDbProcHandler
        // error from either dbprocerrhandle or
        dbprocmsghandle
    };
    CDBLIBERR(ACTION eAction, int
severity = 0, int dberror = 0, int oserr = 0)
    {
        m_eAction = eAction;
        m_severity = severity;
        m_dberror = dberror;
        m_oserr = oserr;
        m_dberrstr = NULL;
        m_oserrstr = NULL;
    };
};
~CDBLIBERR()

```



```

    {
        delete [] m_dberrstr;
        delete [] m_oserrstr;
    };

ACTION m_eAction;
int m_severity;
int m_dberror;
int m_oserr;
char *m_dberrstr;
char *m_oserrstr;

int ErrorType()
{return ERR_TYPE_DBLIB;}
char* ErrorTypeStr() { return
"DBLIB"; }
int ErrorNum()
{return m_dberror;}
char* ErrorText() {return
m_dberrstr;}
int ErrorAction() {
return (int)m_eAction; }
};

class CTPCC_DBLIB_ERR : public CBaseErr
{
public:
    enum CTPCC_DBLIB_ERRS
    {
        ERR_WRONG_SP_VERSION = 1,
server // "Wrong version of stored procs on database
        ERR_INVALID_CUST,
// "Invalid Customer id.name."
        ERR_NO_SUCH_ORDER,
// "No orders found for customer."
        ERR_RETRIED_TRANS,
// "Retries before transaction
succeeded."
    };

    CTPCC_DBLIB_ERR( int iErr ) {
m_errno = iErr; m_iTryCount = 0; }
    CTPCC_DBLIB_ERR( int iErr, int
iTryCount ) { m_errno = iErr; m_iTryCount = iTryCount;
};

    int m_errno;
    int m_iTryCount;

    int ErrorType()
{return ERR_TYPE_TPCC_DBLIB;}
    char* ErrorTypeStr() { return
"TPCC DBLIB"; }
    int ErrorNum()
{return m_errno;}

    char* ErrorText();
};

class DllDecl CTPCC_DBLIB : public CTPCC_BASE
{
private:
// declare variables and private
functions here...
    PDBPROCESS m_dbproc;
    CDBLIBERR *m_DbLibErr;
// not allocated until needed (maybe never)

```

```

        CSQLERR *m_SqlErr;
// not allocated until
needed (maybe never)
    int
    m_MaxRetries; // retry count
on deadlock

    void DiscardNextRows(int
iExpectedCount);
    void DiscardNextResults(int
iExpectedCount);
    void ThrowError( CDBLIBERR::ACTION
eAction );
    void ResetError();

    union
    {
        NEW_ORDER_DATA
NewOrder;
        PAYMENT_DATA
Payment;
        DELIVERY_DATA
Delivery;
        STOCK_LEVEL_DATA
StockLevel;
        ORDER_STATUS_DATA
OrderStatus;
    }
    m_txn;

public:
    CTPCC_DBLIB(LPCSTR szServer, LPCSTR
szUser, LPCSTR szPassword, LPCSTR szHost, LPCSTR
szDatabase );
    ~CTPCC_DBLIB(void);

    inline PNEW_ORDER_DATA
BuffAddr_NewOrder() { return
&m_txn.NewOrder; }
    inline PPAYMENT_DATA
BuffAddr_Payment() { return
&m_txn.Payment; }
    inline PDELIVERY_DATA
BuffAddr_Delivery() { return
&m_txn.Delivery; }
    inline PSTOCK_LEVEL_DATA
BuffAddr_StockLevel() { return
&m_txn.StockLevel; }
    inline PORDER_STATUS_DATA
BuffAddr_OrderStatus() { return
&m_txn.OrderStatus; };

    void NewOrder ();
    void Payment ();
    void Delivery ();
    void StockLevel ();
    void OrderStatus ();

// these are public because they
must be called from the dblib err_handler and
msg_hangler
// outside of the class
void SetDbLibError(int severity,
int dberr, int oserr, LPCSTR dberrstr, LPCSTR
oserrstr);
void SetSqlError( int msgno, int
msgstate, int severity, LPCSTR msgtext );
};

extern "C" DllDecl CTPCC_DBLIB* CTPCC_DBLIB_new

```

```

(LPCSTR szServer, LPCSTR szUser, LPCSTR
szPassword, LPCSTR szHost, LPCSTR szDatabase );
typedef CTPCC_DBLIB* (TYPE_CTPCC_DBLIB)(LPCSTR, LPCSTR,
LPCSTR, LPCSTR, LPCSTR);

```

tm_com_dll/src/tpcc_com.h

```

/* FILE: TPCC_COM.H
Microsoft TPC-C
Kit Ver. 4.20.000
Copyright
Microsoft, 1999
All Rights Reserved
not yet audited
PURPOSE: Header file for TPC-C COM+ class
implementation.
Change history:
4.20.000 - first version
*/

#pragma once

#include <stdio.h>
#include "..\..\tpcc_com_ps\src\tpcc_com_ps.h"

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class CCOMERR : public CBaseErr
{
private:
    char m_szErrorText[64];

public:
// use this interface for genuine
COM errors
    CCOMERR( HRESULT hr )
    {
        m_hr = hr;
        m_iErrorType = 0;
        m_iError = 0;
    }

// use this interface to
impersonate a non-COM error type
    CCOMERR( int iErrorType, int iError
)
    {
        m_iErrorType =
        m_iError = iError;
        m_hr = S_OK;
    }

    int m_hr;
    int m_iErrorType;
    int m_iError;

```

```

// A CCOMERR class can impersonate
another class, which happens if the error
// was not actually a COM Services
error, but was simply transmitted back via COM.
int ErrorType()
{
    if (m_iErrorType == 0)
        return
ERR_TYPE_COM;
    else
        return
m_iErrorType;
}
char *ErrorTypeStr() { return
"COM"; }
int ErrorNum()
{
    if (m_iErrorType == 0)
        return m_hr;
// return COM error
else
return
m_iError; // return impersonated error
}
char *ErrorText()
{
    if (m_hr == S_OK)
        sprintf(
m_szErrorText, "Error: Class %d, error # %d",
m_iErrorType, m_iError);
    else
        sprintf(
m_szErrorText, "Error: COM HRESULT %x", m_hr );
return m_szErrorText;
};
class DllDecl CTPCC_COM : public CTPCC_BASE
{
private:
    BOOL m_bSinglePool;
// COM Interface pointers
ITPCC*
m_pNewOrder;
ITPCC*
m_pPayment;
ITPCC*
m_pStockLevel;
ITPCC*
m_pOrderStatus;
struct COM_DATA
{
    int ErrorType;
    int error;
    union
    {
        NEW_ORDER_DATA
NewOrder;
        PAYMENT_DATA
Payment;
        DELIVERY_DATA
Delivery;
        STOCK_LEVEL_DATA
StockLevel;
        ORDER_STATUS_DATA
OrderStatus;
    } u;
};
};

```

```

} *m_pTxn;
public:
    VARIANT m_vTxn;
    CTPCC_COM(BOOL bSinglePool);
    ~CTPCC_COM(void);
    inline PNEW_ORDER_DATA
    BuffAddr_NewOrder() { return
&m_pTxn->u.NewOrder; };
    inline PPAYMENT_DATA
    BuffAddr_Payment() { return
&m_pTxn->u.Payment; };
    inline PDELIVERY_DATA
    BuffAddr_Delivery() { return
&m_pTxn->u.Delivery; };
    inline PSTOCK_LEVEL_DATA
    BuffAddr_StockLevel() { return
&m_pTxn->u.StockLevel; };
    inline PORDER_STATUS_DATA
    BuffAddr_OrderStatus() { return
&m_pTxn->u.OrderStatus; };
    void NewOrder ()
    void Payment ()
    void StockLevel ()
    void OrderStatus ();
    void Delivery () {
throw new CCOMERR(E_NOTIMPL); } // not supported
};
inline void ReleaseInterface(IUnknown *pUnk)
{
    if (pUnk)
    {
        pUnk->Release();
        pUnk = NULL;
    }
}
// wrapper routine for class constructor
extern "C" __declspec(dllexport) CTPCC_COM*
CTPCC_COM_new(BOOL);
typedef CTPCC_COM* (TYPE_CTPCC_COM)(BOOL);

```

tpcc_com_all/src/tpcc_com_all.def

```

; tpcc_com_all.def : Declares the module parameters.
LIBRARY "tpcc_com_all.dll"
EXPORTS
    DllCanUnloadNow @1 PRIVATE
    DllGetClassObject @2 PRIVATE
    DllRegisterServer @3 PRIVATE
    DllUnregisterServer @4 PRIVATE

```

tpcc_com_all/src/tpcc_com_all.idl

```

/* FILE: TPCC.IDL Microsoft TPC-C
Kit Ver. 4.20.000 Copyright
Microsoft, 1999 All Rights Reserved
* not yet audited
* PURPOSE: IDL source for TPCC.dll. This file
is processed by the MIDL tool to produce the
type library (TPCC.tlb) and marshalling code.
* Change history: 4.20.000 - first version
*/
interface TPCC;
interface NewOrder;
interface OrderStatus;
interface Payment;
interface StockLevel;
import "oidl.idl";
import "ocidl.idl";
import "..\tpcc_com_ps\src\tpcc_com_ps.idl";
[
    uuid(122A3117-2520-11D3-BA71-00C04FBFE08B),
    version(1,0),
    helpstring("TPC-C 1.0 Type Library")
]
library TPCCLib
{
    importlib("stdole32.tlb");
    importlib("stdole2.tlb");
    [
        uuid(122A3128-2520-11D3-BA71-
00C04FBFE08B),
        helpstring("All Txns Class")
    ]
    coclass TPCC
    {
        [default] interface ITPCC;
    };
    [
        uuid(975BAABF-84A7-11D2-BA47-
00C04FBFE08B),
        helpstring("NewOrder Class")
    ]
    coclass NewOrder
    {
        [default] interface ITPCC;
    };
    [
        uuid(266836AD-A50D-11D2-BA4E-
00C04FBFE08B),
        helpstring("OrderStatus Class")
    ]
    coclass OrderStatus
    {
        [default] interface ITPCC;
    };
};

```

```

[
    uuid(CD02F7EF-A4FA-11D2-BA4E-
00C04FBFE08B),
    helpstring("Payment Class")
]
coclass Payment
{
    [default] interface ITPCC;
};

[
    uuid(2668369E-A50D-11D2-BA4E-
00C04FBFE08B),
    helpstring("StockLevel Class")
]
coclass StockLevel
{
    [default] interface ITPCC;
};
};

```

tpcc_com_all/src/tpcc_com_all.rc

```

//Microsoft Developer Studio generated resource script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "winres.h"
////////////////////////////////////
//
// English (U.S.) resources
//
#if !defined(AFX_RESOURCE_DLL) || defined(AFX_TARG_ENU)
#ifndef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif // _WIN32

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// TEXTINCLUDE
//
1 TEXTINCLUDE DISCARDABLE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE
BEGIN

```

```

#include "winres.h"\r\n
"\0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN
    "1 TYPELIB "tpcc_com_all.tlb"\r\n"
    "\0"
END

#endif // APSTUDIO_INVOKED

#ifdef _MAC
////////////////////////////////////
//
// Version
//
VS_VERSION_INFO VERSIONINFO
FILEVERSION 1,0,0,1
PRODUCTVERSION 1,0,0,1
FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
FILEFLAGS 0x1L
#else
FILEFLAGS 0x0L
#endif
FILEOS 0x4L
FILETYPE 0x2L
FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904B0"
        BEGIN
            VALUE "CompanyName", "\0"
            VALUE "FileDescription", "tpcc_com_all
Module\0"
            VALUE "FileVersion", "1, 0, 0, 1\0"
            VALUE "InternalName", "TPCCNEWORDER\0"
            VALUE "LegalCopyright", "Copyright 1997\0"
            VALUE "OriginalFilename",
"tpcc_com_all.DLL\0"
            VALUE "ProductName", "tpcc_com_all
Module\0"
            VALUE "ProductVersion", "1, 0, 0, 1\0"
            VALUE "OLESelfRegister", "\0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END

#endif // !_MAC

////////////////////////////////////
//
// REGISTRY
//
IDR_TPCC REGISTRY DISCARDABLE
"tpcc_com_all.rgs"
IDR_NEWORDER REGISTRY DISCARDABLE
"tpcc_com_no.rgs"
IDR_ORDERSTATUS REGISTRY DISCARDABLE
"tpcc_com_os.rgs"

```

```

IDR_PAYMENT REGISTRY DISCARDABLE
"tpcc_com_pay.rgs"
IDR_STOCKLEVEL REGISTRY DISCARDABLE
"tpcc_com_sl.rgs"

////////////////////////////////////
//
// String Table
//

STRINGTABLE DISCARDABLE
BEGIN
    IDS_PROJNAME "tpcc_com_all"
END

#endif // English (U.S.) resources
////////////////////////////////////

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
1 TYPELIB "tpcc_com_all.tlb"

#endif // not APSTUDIO_INVOKED

```

tpcc_com_all/src/tpcc_com_all.rgs

```

HKCR
{
    TPCC.AllTxns.1 = s 'All Txns Class'
    {
        CLSID = s '{122A3128-2520-11D3-
BA71-00C04FBFE08B}'
        TPCC.AllTxns = s 'TPCC Class'
        {
            CurVer = s 'TPCC.AllTxns.1'
        }
        NoRemove CLSID
        {
            ForceRemove {122A3128-2520-11D3-
BA71-00C04FBFE08B} = s 'TPCC Class'
            {
                ProgID = s
'TPCC.AllTxns.1'
                VersionIndependentProgID
= s 'TPCC.AllTxns'
                InprocServer32 = s
'&MODULE%'
                {
                    val
ThreadingModel = s 'Both'
                }
            }
        }
    }
}

```

tpcc_com_all/src/tpcc_com_all_i.c

```
#pragma warning( disable: 4049 ) /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients */

/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:53 2005
*/
/* Compiler settings for .\src\tpcc_com_all.idl:
Oicf, Wl, Zp8, env=Win32 (32b run)
protocol : dce , ms_ext, c_ext
error checks: allocation ref bounds_check enum
stub_data
VC __declspec() decoration level:
__declspec(uuid()), __declspec(selectany),
__declspec(novtable)
DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING( )

#if !defined(_M_IA64) && !defined(_M_AMD64)

#ifndef __cplusplus
extern "C"{
#endif

#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7
,b8) \
DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif

#endif

#endif
```

```
#endif // CLSID_DEFINED

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7
,b8) \
    const type name =
{1,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#ifdef !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00,0
xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0xC0
,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,
0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x
00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xCD02F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00,0
xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x0
0,0xC0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#endif

#ifdef __cplusplus
}
#endif

#endif /* !defined(_M_IA64) && !defined(_M_AMD64) */

#pragma warning( disable: 4049 ) /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients */

/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:53 2005
*/
/* Compiler settings for .\src\tpcc_com_all.idl:
Oicf, Wl, Zp8, env=Win64 (32b run,appending)
protocol : dce , ms_ext, c_ext, robust
error checks: allocation ref bounds_check enum
stub_data
VC __declspec() decoration level:
__declspec(uuid()), __declspec(selectany),
__declspec(novtable)
DECLSPEC_UUID(), MIDL_INTERFACE()
*/
```

```
//@@MIDL_FILE_HEADING( )

#if defined(_M_IA64) || defined(_M_AMD64)

#ifndef __cplusplus
extern "C"{
#endif

#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7
,b8) \
DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7
,b8) \
    const type name =
{1,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#ifdef !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00,0
xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0xC0
,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,
0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x
00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xCD02F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00,0
xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x0
0,0xC0,0x4F,0xBF,0xE0,0x8B);

#endif

#endif
```

```
MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus, 0x266836AD, 0xA50D, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
MIDL_DEFINE_GUID(CLSID,
CLSID_Payment, 0xCD02F7EF, 0xA4FA, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel, 0x2668369E, 0xA50D, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
#undef MIDL_DEFINE_GUID
```

```
#ifdef __cplusplus
}
#endif
```

```
#endif /* defined(_M_IA64) || defined(_M_AMD64) */
```

tpcc_com_all/src/tpcc_com_no.rgs

```
HKCR
{
    TPCC.NewOrder.1 = s 'NewOrder Class'
    {
        CLSID = s '{975BAABF-84A7-11D2-BA47-00C04FBFE08B}'
        TPCC.NewOrder = s 'NewOrder Class'
        {
            CurVer = s 'TPCC.NewOrder.1'
        }
        NoRemove CLSID
        {
            ForceRemove {975BAABF-84A7-11D2-BA47-00C04FBFE08B} = s 'NewOrder Class'
        }
        ProgID = s
        VersionIndependentProgID
    }
    = s 'TPCC.NewOrder'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

tpcc_com_all/src/tpcc_com_os.rgs

```
HKCR
{
    TPCC.OrderStatus.1 = s 'OrderStatus Class'
    {
```

```
        CLSID = s '{266836AD-A50D-11D2-BA4E-00C04FBFE08B}'
        TPCC.OrderStatus = s 'OrderStatus Class'
        {
            CurVer = s 'TPCC.OrderStatus.1'
        }
        NoRemove CLSID
        {
            ForceRemove {266836AD-A50D-11D2-BA4E-00C04FBFE08B} = s 'OrderStatus Class'
        }
        ProgID = s
        VersionIndependentProgID
    }
    = s 'TPCC.OrderStatus'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

tpcc_com_all/src/tpcc_com_pay.rgs

```
HKCR
{
    TPCC.Payment.1 = s 'Payment Class'
    {
        CLSID = s '{CD02F7EF-A4FA-11D2-BA4E-00C04FBFE08B}'
        TPCC.Payment = s 'Payment Class'
        {
            CurVer = s 'TPCC.Payment.1'
        }
        NoRemove CLSID
        {
            ForceRemove {CD02F7EF-A4FA-11D2-BA4E-00C04FBFE08B} = s 'Payment Class'
        }
        ProgID = s
        VersionIndependentProgID
    }
    = s 'TPCC.Payment'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

tpcc_com_all/src/tpcc_com_ps.h

```
#pragma warning( disable: 4049 ) /* more than 64k source lines */
```

```
/* this ALWAYS GENERATED file contains the definitions for the interfaces */
```

```
/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:43 2005
```

```
*/
/* Compiler settings for .\src\tpcc_com_ps.idl:
Oicf, W1, Zp8, env=Win32 (32b run)
protocol : dce , ms_ext, c_ext
error checks: allocation ref bounds_check enum stub_data
VC __declspec() decoration level:
__declspec(uuid()), __declspec(selectany), __declspec(novtable)
DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING( )
```

```
/* verify that the <rpcndr.h> version is high enough to compile this file*/
```

```
#ifndef __REQUIRED_RPCNDR_H_VERSION__
#define __REQUIRED_RPCNDR_H_VERSION__ 440
#endif
```

```
#include "rpc.h"
#include "rpcndr.h"
```

```
#ifndef __RPCNDR_H_VERSION__
#error this stub requires an updated version of <rpcndr.h>
#endif // __RPCNDR_H_VERSION__
```

```
#ifndef COM_NO_WINDOWS_H
#include "windows.h"
#include "ole2.h"
#endif /*COM_NO_WINDOWS_H*/
```

```
#ifndef __tpcc_com_ps_h__
#define __tpcc_com_ps_h__
```

```
#if defined(_MSC_VER) && (_MSC_VER >= 1020)
#pragma once
#endif
```

```
/* Forward Declarations */
```

```
#ifndef __ITPCC_FWD_DEFINED__
#define __ITPCC_FWD_DEFINED__
typedef interface ITPCC ITPCC;
#endif /* __ITPCC_FWD_DEFINED__ */
```

```
/* header files for imported files */
#include "oaidl.h"
#include "ocidl.h"
```

```
#ifdef __cplusplus
extern "C" {
#endif
```

```
void * __RPC_USER MIDL_user_allocate(size_t);
void __RPC_USER MIDL_user_free( void * );
```

```
/* interface __MIDL_itf_tpcc_com_ps_0000 */
/* [local] */
```

```

extern RPC_IF_HANDLE
__MIDL_itf_tpc_com_ps_0000_v0_0_c_ifspec;
extern RPC_IF_HANDLE
__MIDL_itf_tpc_com_ps_0000_v0_0_s_ifspec;

#ifndef __ITPCC_INTERFACE_DEFINED__
#define __ITPCC_INTERFACE_DEFINED__

/* interface ITPCC */
/* [unique][helpstring][uuid][oleautomation][object] */

EXTERN_C const IID IID_ITPCC;

#if defined(__cplusplus) && !defined(CINTERFACE)

    MIDL_INTERFACE("FEE6AA2-84B1-11d2-BA47-00C04FBFE08B")
    ITPCC : public IUnknown
    {
    public:
        virtual HRESULT __stdcall NewOrder(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall Payment(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall Delivery(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall StockLevel(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall OrderStatus(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall CallSetComplete(
            void) = 0;
    };
#else
    /* C style interface */
    typedef struct ITPCCVtbl
    {
        BEGIN_INTERFACE

        HRESULT ( STDMETHODCALLTYPE *QueryInterface )(
            ITPCC * This,
            /* [in] */ REFIID riid,
            /* [iid_is][out] */ void **ppvObject);

        ULONG ( STDMETHODCALLTYPE *AddRef )(
            ITPCC * This);

        ULONG ( STDMETHODCALLTYPE *Release )(
            ITPCC * This);

        HRESULT ( STDMETHODCALLTYPE *NewOrder )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE *Payment )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE *Delivery )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE *StockLevel )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE *OrderStatus )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE *CallSetComplete )(
            ITPCC * This);
    };
#endif

```

```

HRESULT ( STDMETHODCALLTYPE *Delivery )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *StockLevel )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *OrderStatus )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *CallSetComplete )(
    ITPCC * This);

END_INTERFACE
} ITPCCVtbl;

interface ITPCC
{
    CONST_VTBL struct ITPCCVtbl *lpVtbl;
};

#ifdef COBJMACROS

#define ITPCC_QueryInterface(This,riid,ppvObject) \
    (This->lpVtbl->QueryInterface(This,riid,ppvObject))
#define ITPCC_AddRef(This) \
    (This->lpVtbl->AddRef(This))
#define ITPCC_Release(This) \
    (This->lpVtbl->Release(This))

#define ITPCC_NewOrder(This,txn_in,txn_out) \
    (This->lpVtbl->NewOrder(This,txn_in,txn_out))
#define ITPCC_Payment(This,txn_in,txn_out) \
    (This->lpVtbl->Payment(This,txn_in,txn_out))
#define ITPCC_Delivery(This,txn_in,txn_out) \
    (This->lpVtbl->Delivery(This,txn_in,txn_out))
#define ITPCC_StockLevel(This,txn_in,txn_out) \
    (This->lpVtbl->StockLevel(This,txn_in,txn_out))
#define ITPCC_OrderStatus(This,txn_in,txn_out) \
    (This->lpVtbl->OrderStatus(This,txn_in,txn_out))
#define ITPCC_CallSetComplete(This) \
    (This->lpVtbl->CallSetComplete(This))

#endif /* COBJMACROS */

#endif /* C style interface */

HRESULT STDMETHODCALLTYPE ITPCC_NewOrder_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

```

```

void __RPC_STUB ITPCC_NewOrder_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_Payment_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void __RPC_STUB ITPCC_Payment_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_Delivery_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void __RPC_STUB ITPCC_Delivery_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_StockLevel_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void __RPC_STUB ITPCC_StockLevel_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_OrderStatus_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void __RPC_STUB ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_CallSetComplete_Proxy(
    ITPCC * This);

void __RPC_STUB ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *_pdwStubPhase);

```

```

#endif /* __ITPC_INTERFACE_DEFINED__ */

/* Additional Prototypes for ALL interfaces */

unsigned long          __RPC_USER  VARIANT_UserSize(
unsigned long *, unsigned long          , VARIANT *
);
unsigned char * __RPC_USER  VARIANT_UserMarshal(
unsigned long *, unsigned char *, VARIANT * );
unsigned char * __RPC_USER
VARIANT_UserUnmarshal(unsigned long *, unsigned char *,
VARIANT * );
void          __RPC_USER  VARIANT_UserFree(
unsigned long *, VARIANT * );

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif
#endif

```

tpcc_com_all/src/tpcc_com_sl.rgs

```

HKCR
{
    TPCC.StockLevel.1 = s 'StockLevel Class'
    {
        CLSID = s '{2668369E-A50D-11D2-
BA4E-00C04FBFE08B}'
        TPCC.StockLevel = s 'StockLevel Class'
        {
            CurVer = s 'TPCC.StockLevel.1'
        }
        NoRemove CLSID
        {
            ForceRemove {2668369E-A50D-11D2-
BA4E-00C04FBFE08B} = s 'StockLevel Class'
            {
                ProgID = s
                VersionIndependentProgID
= s 'TPCC.StockLevel'
                InprocServer32 = s
                {
                    val
                }
            }
        }
    }
}

```

tpcc_com_ps/src/dlldata.c

```

/*****
***
DllData file -- generated by MIDL compiler

DO NOT ALTER THIS FILE

This file is regenerated by MIDL on every IDL file
compile.

To completely reconstruct this file, delete it and
rerun MIDL
on all the IDL files in this DLL, specifying this
file for the
/dlldata command line option
*****/

#include <rpcproxy.h>

#ifdef __cplusplus
extern "C" {
#endif

EXTERN_PROXY_FILE( tpcc_com_ps )

PROXYFILE_LIST_START
/* Start of list */
REFERENCE_PROXY_FILE( tpcc_com_ps ),
/* End of list */
PROXYFILE_LIST_END

DLLDATA_ROUTINES( aProxyFileList, GET_DLL_CLSID )

#ifdef __cplusplus
} /*extern "C" */
#endif

/* end of generated dlldata file */

//FILE: RTETIME.H

#define MAX_JULIAN_TIME
0x7FFFFFFFFFFFFFFF
#define JULIAN_TIME __int64
#define TC_TIME DWORD

```

common/txnlog/include/rtetime.h

```

/* FILE: rtetime.h : header file
* Copyright 1997 Microsoft Corp., All rights reserved.
*
* Source code licensed to Tandem Computers for
Internal
* use only. Redistribution of source or object files
or
* any derivative works is prohibited. By agreement,
this
* notice may not be removed.
*
* Authors: Charles Levine, Philip Durr
* Microsoft Corp.
*/

```

```

extern "C"
{
    BOOL          InitJulianTime(LPSYSTEMTIME
lpInitTime);
    JULIAN_TIME  GetJulianTime(void);
    DWORD        MyTickCount(void);
    votTime(int iYear, int iMonth, int iDay, int iHour, int
iMinute, int iSecond);
    JULIAN_TIME  Get64BitTime(LPSYSTEMTIME
lpInitTime);
    int          JulianDay( int yr, int
mm, int dd );
    void        JulianToTime(JULIAN_TIME julianTS,
int* yr, int* mm, int* dd, int *hh, int *mi, int *ss);
    void        JulianToCalendar( int day, int* yr,
int* mm, int* dd );
}

```

common/txnlog/include/spinlock.h

```

/* FILE: SPINLOCK.H
*
* Copyright 1997 Microsoft Corp., All rights reserved.
*
* Source code licensed to Tandem Computers for
Internal
* use only. Redistribution of source or object files
or
* any derivative works is prohibited. By agreement,
this
* notice may not be removed.
*
* Authors: Mike Parkes, Charles Levine, Philip Durr
* Microsoft Corp.
*/

#ifdef _INC_Spinlock

const LONG LockClosed = 1;
const LONG LockOpen = 0;

/*****
*****
* Spinlock and Semaphore locking.
*
* This class provides a very conservative
locking scheme.
* The assumption behind the code is that
locks will be
* held for a very short time. When a lock
is taken a memory
* location is exchanged. All other
threads that want this
* lock wait by spinning and sometimes
sleeping on a semaphore
* until it becomes free again. The only
other choice is not
* to wait at all and move on to do
something else. This
* module should normally be used in
conjunction with cache
* aligned memory in minimize cache line
misses.
*
*/

```

```

*****
*****/
class Spinlock
{
    // Private data.
    HANDLE
Semaphore;
    volatile LONG
m_Spinlock;
    volatile LONG
Waiting;

#ifdef _DEBUG
// Counters for debugging
builds.
    volatile LONG
TotalLocks;
    volatile LONG
TotalSleeps;
    volatile LONG
TotalSpins;
    volatile LONG
TotalWaits;
#endif
public:
    // Public functions.
    Spinlock( void );
    inline BOOL ClaimLock(
    inline void ReleaseLock(
    BOOL Wait = TRUE );
    inline void ReleaseLock(
    void );
    ~Spinlock( void );
    // Disabled operations.
    Spinlock( const Spinlock
    & Copy );
    void operator=( const
    Spinlock & Copy );

private:
    // Private functions.
    inline BOOL
ClaimSpinlock( volatile LONG *sl );
    void WaitForLock( void );
    void WakeAllSleepers(
    void );
};

/*****
*****
*
* A guaranteed atomic exchange.
*
* An attempt is made to claim the
Spinlock. This action is
* guaranteed to be atomic.
*

*****
*****/

inline BOOL Spinlock::ClaimSpinlock( volatile
LONG *Spinlock )
{
#ifdef _DEBUG
InterlockedIncrement(
(LPLONG) & TotalLocks );
#endif

```

```

return ( (*Spinlock) == LockOpen)
&& (InterlockedExchange( (LPLONG)Spinlock, LockClosed )
== LockOpen) );
}

/*****
*****
*
* Claim the Spinlock.
*
* Claim the lock if available else wait or
exit.
*

*****
*****/

inline BOOL Spinlock::ClaimLock( BOOL Wait )
{
    if ( ! ClaimSpinlock( (volatile
LONG*) & m_Spinlock ) )
    {
        if ( Wait )
            WaitForLock();
        return Wait;
    }
    return TRUE;
}

/*****
*****
*
* Release the Spinlock.
*
* Release the lock and if needed wakeup
any sleepers.
*

*****
*****/

inline void Spinlock::ReleaseLock( void )
{
    m_Spinlock = LockOpen;
    if ( Waiting > 0 )
        WakeAllSleepers();
}

#define _INC_Spinlock

#endif

```


Appendix B: Database Design

Build Scripts

setup.cmd

```
-----  
:-- FILE:      SETUP.CMD  
:-- Microsoft TPC-C Kit Ver. 4.63  
:-- Copyright Microsoft, 2001, 2002,  
2005  
:-- All Rights Reserved  
:--  
:-- PURPOSE:   Calls RunSQLCfg.sql to configure SQL  
Server  
:--  
:-- ARGUMENTS:  /? displays help for SETUP  
:--  
:--  
-----  
@cscript SetupScripts\setup.vbs //H:CScript //I %1 %2  
%3 %4 %5 %6 %7
```

createdb.sql

```
-----  
--  
-- File:      CREATEDB.SQL  
--  
-- Microsoft TPC-C Benchmark Kit Ver. 4.63  
-- Copyright Microsoft, 2005  
--  
-----  
SET ANSI_NULL_DFLT_OFF ON  
GO  
  
USE master  
GO  
  
-----  
-- Create temporary table for timing  
-----  
IF EXISTS( SELECT name FROM sysobjects WHERE name =  
'tpcc_timer' )  
DROP TABLE tpcc_timer
```

```
GO  
  
CREATE TABLE tpcc_timer  
    (start_date CHAR(30),  
    end_date CHAR(30))  
  
GO  
  
INSERT INTO tpcc_timer VALUES(0,0)  
GO  
  
-----  
-- Store starting time  
-----  
UPDATE tpcc_timer  
SET start_date = (SELECT CONVERT(CHAR(30),  
GETDATE(), 21))  
GO  
  
-----  
-- create main database files  
-----  
CREATE DATABASE tpcc  
ON PRIMARY  
    ( NAME = MSSQL_tpcc_root,  
    FILENAME = 'C:\MSSQL_tpcc_root.mdf',  
    SIZE = 8MB,  
    FILEGROWTH = 0),  
FILEGROUP MSSQL_misc_fg  
    ( NAME = MSSQL_misc1,  
    FILENAME = 'G:',  
    SIZE = 34000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_misc2,  
    FILENAME = 'I:',  
    SIZE = 34000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_misc3,  
    FILENAME = 'M:',  
    SIZE = 34000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_misc4,  
    FILENAME = 'O:',  
    SIZE = 34000MB,  
    FILEGROWTH = 0),  
FILEGROUP MSSQL_cs_fg  
    ( NAME = MSSQL_cs1,  
    FILENAME = 'H:',  
    SIZE = 68000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_cs2,  
    FILENAME = 'J:',  
    SIZE = 68000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_cs3,  
    FILENAME = 'N:',  
    SIZE = 68000MB,  
    FILEGROWTH = 0),  
    ( NAME = MSSQL_cs4,  
    FILENAME = 'P:',  
    SIZE = 68000MB,  
    FILEGROWTH = 0),  
LOG ON  
    ( NAME = MSSQL_tpcc_log,  
    FILENAME = 'L:',  
    SIZE = 198000MB,  
    FILEGROWTH = 0)  
COLLATE Latin1_General_BIN  
GO  
  
-----  
-- Store ending time
```

```
-----  
UPDATE tpcc_timer  
SET end_date = (SELECT CONVERT(CHAR(30),  
GETDATE(), 21))  
GO  
  
SELECT DATEDIFF(second,(SELECT start_date FROM  
tpcc_timer),(SELECT end_date FROM tpcc_timer))  
GO  
  
-----  
-- remove temporary table  
-----  
IF EXISTS ( SELECT name FROM sysobjects WHERE name =  
'tpcc_timer' )  
DROP TABLE tpcc_timer  
GO
```

tables.sql

```
-----  
--  
-- File:      TABLES.SQL  
--  
-- Microsoft TPC-C Benchmark Kit Ver. 4.63  
-- Copyright Microsoft, 2005  
--  
-- Creates TPC-C tables  
-----  
-----  
SET ANSI_NULL_DFLT_OFF ON  
GO  
  
USE tpcc  
GO  
  
-----  
-- Remove all existing TPC-C tables  
-----  
if exists ( select name from sysobjects where name =  
'warehouse' )  
drop table warehouse  
go  
if exists ( select name from sysobjects where name =  
'district' )  
drop table district  
go  
if exists ( select name from sysobjects where name =  
'customer' )  
drop table customer  
go  
if exists ( select name from sysobjects where name =  
'history' )  
drop table history  
go  
if exists ( select name from sysobjects where name =  
'new_order' )  
drop table new_order  
go
```

```

if exists ( select name from sysobjects where name =
'orders' )
drop table orders
go
if exists ( select name from sysobjects where name =
'order_line' )
drop table order_line
go
if exists ( select name from sysobjects where name =
'item' )
drop table item
go
if exists ( select name from sysobjects where name =
'stock' )
drop table stock
go
-----
-- Create new tables
-----
create table warehouse
(
w_id int,
w_ytd money,
w_tax smallmoney,
w_name char(10),
w_street_1 char(20),
w_street_2 char(20),
w_city char(20),
w_state char(2),
w_zip char(9)
) on MSSQL_misc_fg
go
create table district
(
d_id tinyint,
d_w_id int,
d_ytd money,
d_next_o_id int,
d_tax smallmoney,
d_name char(10),
d_street_1 char(20),
d_street_2 char(20),
d_city char(20),
d_state char(2),
d_zip char(9)
) on MSSQL_misc_fg
go
create table customer
(
c_id int,
c_d_id tinyint,
c_w_id int,
c_discount smallmoney,
c_credit_lim money,
c_last char(16),
c_first char(16),
c_credit char(2),
c_balance money,
c_ytd_payment money,
c_payment_cnt smallint,
c_delivery_cnt smallint,
c_street_1 char(20),
c_street_2 char(20),
c_city char(20),
c_state char(2),
c_zip char(9),
c_phone char(16),
c_since datetime,

```

```

c_middle char(2),
c_data char(500)
) on MSSQL_cs_fg
go
-- Use the following table option if using c_data
varchar(max)
-- sp_tableoption 'customer','large value types out of
row','1'
-- go
create table history
(
h_c_id int,
h_c_d_id tinyint,
h_c_w_id int,
h_d_id tinyint,
h_w_id int,
h_date datetime,
h_amount smallmoney,
h_data char(24)
) on MSSQL_misc_fg
go
create table new_order
(
no_o_id int,
no_d_id tinyint,
no_w_id int
) on MSSQL_misc_fg
go
create table orders
(
o_id int,
o_d_id tinyint,
o_w_id int,
o_c_id int,
o_carrier_id tinyint,
o_ol_cnt tinyint,
o_all_local tinyint,
o_entry_d datetime
) on MSSQL_misc_fg
go
create table order_line
(
ol_o_id int,
ol_d_id tinyint,
ol_w_id int,
ol_number tinyint,
ol_i_id int,
ol_delivery_d datetime,
ol_amount smallmoney,
ol_supply_w_id int,
ol_quantity int,
ol_dist_info smallint,
char(24)
) on MSSQL_misc_fg
go
create table item
(
i_id int,
i_name char(24),
i_price smallmoney,
i_data char(50),
i_im_id int
) on MSSQL_misc_fg
go
create table stock
(

```

```

s_i_id int,
s_w_id int,
s_quantity smallint,
s_ytd int,
s_order_cnt smallint,
s_remote_cnt smallint,
s_data char(50),
s_dist_01 char(24),
s_dist_02 char(24),
s_dist_03 char(24),
s_dist_04 char(24),
s_dist_05 char(24),
s_dist_06 char(24),
s_dist_07 char(24),
s_dist_08 char(24),
s_dist_09 char(24),
s_dist_10 char(24)
) on MSSQL_cs_fg
go

```

idxcuscl.sql

```

-----
--
-- File: IDXCUSCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-- Creates clustered index on customer table
--
-----
USE tpcc
GO
DECLARE @startdate DATETIME,
        @enddate DATETIME
SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)
IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'customer_c1' )
DROP INDEX customer.customer_c1
CREATE UNIQUE CLUSTERED INDEX customer_c1 ON
customer(c_w_id, c_d_id, c_id)
ON MSSQL_cs_fg
SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO

```

idxcusnc.sql

```
-----
--
-- File:   IDXCUSNC.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates non-clustered index on customer
table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'customer_ncl' )
    DROP INDEX customer.customer_ncl

CREATE UNIQUE NONCLUSTERED INDEX customer_ncl ON
customer(c_w_id, c_d_id, c_last, c_first, c_id)
ON MSSQL_cs_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO
```

idxdiscl.sql

```
-----
--
-- File:   IDXDISCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on district table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
```

```
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'district_cl' )
    DROP INDEX district.district_cl

CREATE UNIQUE CLUSTERED INDEX district_cl ON
district(d_w_id, d_id)
WITH FILLFACTOR=100 ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO
```

idxitmcl.sql

```
-----
--
-- File:   IDXITMCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on item table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'item_cl' )
    DROP INDEX item.item_cl

CREATE UNIQUE CLUSTERED INDEX item_cl ON item(i_id)
ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO
```

idxnodcl.sql

```
-----
--
-- File:   IDXNODCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on new-order table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'new_order_cl' )
    DROP INDEX new_order.new_order_cl

CREATE UNIQUE CLUSTERED INDEX new_order_cl ON
new_order(no_w_id, no_d_id, no_o_id)
ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO
```

idxodlcl.sql

```
-----
--
-- File:   IDXODLCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on order-line table
--
-----
```

```

-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'order_line_c1' )
  DROP INDEX order_line.order_line_c1

CREATE UNIQUE CLUSTERED INDEX order_line_c1 ON
order_line(ol_w_id, ol_d_id, ol_o_id, ol_number)
ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO

```

idxordcl.sql

```

-----
--
-- File:   IDXORDCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-- Creates clustered index on orders table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'orders_c1' )
  DROP INDEX orders.orders_c1

CREATE UNIQUE CLUSTERED INDEX orders_c1 ON
orders(o_w_id, o_d_id, o_id)
ON MSSQL_misc_fg

```

```

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO

```

idxstkcl.sql

```

-----
--
-- File:   IDXSTKCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-- Creates clustered index on stock table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'stock_c1' )
  DROP INDEX stock.stock_c1

CREATE UNIQUE CLUSTERED INDEX stock_c1 ON stock(s_i_id,
s_w_id)
ON MSSQL_cs_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO

```

idxwarcl.sql

```

-----
--
-- File:   IDXWARCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--

```

```

-- Copyright Microsoft, 2005
--
-- Creates clustered index on warehouse table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'warehouse_c1' )
  DROP INDEX warehouse.warehouse_c1

CREATE UNIQUE CLUSTERED INDEX warehouse_c1 ON
warehouse(w_id)
WITH FILLFACTOR=100 ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
       DATEDIFF(second, @startdate, @enddate)
GO

```

idxordnc.sql

```

-----
--
-- File:   IDXORDNC.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-- Creates non-clustered index on orders table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'orders_nc1' )
  DROP INDEX orders.orders_nc1

```

```

CREATE INDEX orders_ncl ON orders(o_w_id, o_d_id,
o_c_id, o_id)
ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
DATEDIFF(second, @startdate, @enddate)
GO

```

dbopt1.sql

```

-----
--
-- File: DBOPT1.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Sets database options for load
--
-----
USE master
GO

ALTER DATABASE tpcc SET RECOVERY BULK_LOGGED
GO

EXEC sp_dboption tpcc,'trunc. log on chkpt.',TRUE
GO

ALTER DATABASE tpcc SET TORN_PAGE_DETECTION OFF
GO

ALTER DATABASE tpcc SET PAGE_VERIFY NONE
GO

USE tpcc
GO

CHECKPOINT
GO

```

dbopt2.sql

```

-----
--
-- File: DBOPT2.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--

```

```

-- Copyright Microsoft, 2005
--
-- Sets database options after load
--
-----
ALTER DATABASE tpcc SET RECOVERY FULL
GO

USE tpcc
GO

CHECKPOINT
GO

sp_configure 'allow updates',1
GO

RECONFIGURE WITH OVERRIDE
GO

DECLARE @msg varchar(50)

-----
-- OPTIONS FOR SQL SERVER 2000 --
-- Set option values for user-defined indexes --
-----

SET @msg = ' '
PRINT @msg
SET @msg = 'Setting SQL Server indexoptions'
PRINT @msg
SET @msg = ' '
PRINT @msg

EXEC sp_indexoption 'customer',
'DisAllowPageLocks', TRUE
EXEC sp_indexoption 'district',
'DisAllowPageLocks', TRUE
EXEC sp_indexoption 'warehouse',
'DisAllowPageLocks', TRUE
EXEC sp_indexoption 'stock',
'DisAllowPageLocks', TRUE
EXEC sp_indexoption 'order_line', 'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'orders', 'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'new_order', 'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'item', 'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'item',
'DisAllowPageLocks', FALSE
GO

Print ' '
Print '*****'
Print 'Pre-specified Locking Hierarchy:'
Print ' Lockflag = 0 ==> No pre-specified
hierarchy'
Print ' Lockflag = 1 ==> Lock at Page-level then
Table-level'
Print ' Lockflag = 2 ==> Lock at Row-level then
Table-level'
Print ' Lockflag = 3 ==> Lock at Table-level'
Print ' '

SELECT name,

```

```

lockflags
sysindexes
WHERE object_id('warehouse') = id OR
object_id('district') = id OR
object_id('customer') = id OR
object_id('stock') = id OR
object_id('orders') = id OR
object_id('order_line') = id OR
object_id('history') = id OR
object_id('new_order') = id OR
object_id('item') = id

ORDER BY lockflags asc
GO

sp_configure 'allow updates',0
GO

RECONFIGURE WITH OVERRIDE
GO

EXEC sp_dboption tpcc, 'auto update statistics',
FALSE
EXEC sp_dboption tpcc, 'auto create statistics',
FALSE
GO

DECLARE @db_id int,
@tbl_id int

SET @db_id = DB_ID('tpcc')
SET @tbl_id = OBJECT_ID('tpcc..warehouse')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..district')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..new_order')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..item')
DBCC PINTABLE (@db_id, @tbl_id)
GO

```

backup.sql

```

-----
--
-- File: BACKUP.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-----
DECLARE @startdate DATETIME,
@enddate DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
CONVERT(VARCHAR(30),@startdate, 21)

```

```
DUMP DATABASE tpcc TO tpccback3, tpccback4 WITH init,
stats = 5

SELECT @enddate = GETDATE()
SELECT 'End date: ',
      CONVERT(VARCHAR(30),@enddate, 21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate,
@enddate)
GO
```

restore.sql

```
-----
--
-- File: RESTORE.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-----
DECLARE @startdate DATETIME,
        @enddate DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate, 21)

LOAD DATABASE tpcc FROM tpccback3, tpccback4 WITH stats
= 1

SELECT @enddate = GETDATE()
SELECT 'End date: ',
      CONVERT(VARCHAR(30),@enddate, 21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO
```

Stored Procedures

neword.sql

```
-----
--
-- File: NEWORD.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-----
```

```
-- Copyright Microsoft, 2005
--
--
-- Creates neworder stored procedure
--
-- Interface Level: 4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_neworder' )
DROP PROCEDURE tpcc_neworder
GO

CREATE PROCEDURE tpcc_neworder
    @w_id int,
    @d_id tinyint,
    @c_id int,
    @o_ol_cnt tinyint,
    @o_all_local tinyint,
    @i_id1 int = 0, @s_w_id1 int
= 0, @ol_qty1 smallint = 0,
    @i_id2 int = 0, @s_w_id2 int
= 0, @ol_qty2 smallint = 0,
    @i_id3 int = 0, @s_w_id3 int
= 0, @ol_qty3 smallint = 0,
    @i_id4 int = 0, @s_w_id4 int
= 0, @ol_qty4 smallint = 0,
    @i_id5 int = 0, @s_w_id5 int
= 0, @ol_qty5 smallint = 0,
    @i_id6 int = 0, @s_w_id6 int
= 0, @ol_qty6 smallint = 0,
    @i_id7 int = 0, @s_w_id7 int
= 0, @ol_qty7 smallint = 0,
    @i_id8 int = 0, @s_w_id8 int
= 0, @ol_qty8 smallint = 0,
    @i_id9 int = 0, @s_w_id9 int
= 0, @ol_qty9 smallint = 0,
    @i_id10 int = 0, @s_w_id10 int
= 0, @ol_qty10 smallint = 0,
    @i_id11 int = 0, @s_w_id11 int
= 0, @ol_qty11 smallint = 0,
    @i_id12 int = 0, @s_w_id12 int
= 0, @ol_qty12 smallint = 0,
    @i_id13 int = 0, @s_w_id13 int
= 0, @ol_qty13 smallint = 0,
    @i_id14 int = 0, @s_w_id14 int
= 0, @ol_qty14 smallint = 0,
    @i_id15 int = 0, @s_w_id15 int
= 0, @ol_qty15 smallint = 0

AS
DECLARE @w_tax smallmoney,
        @d_tax smallmoney,
        @c_last char(16),
        @c_credit char(2),
```

```

        @c_discount smallmoney,
        @i_price smallmoney,
        @i_name char(24),
        @i_data char(50),
        @o_entry_d datetime,
        @remote_flag int,
        @s_quantity smallint,
        @s_data char(50),
        @s_dist char(24),
        @li_no int,
        @o_id int,
        @commit_flag tinyint,
        @li_id int,
        @li_s_w_id int,
        @li_qty smallint,
        @ol_number int,
        @c_id_local int

BEGIN

BEGIN TRANSACTION n

-----
-- get district tax and next available order id and
update
-- plus initialize local variables
-----
UPDATE district
SET @d_tax = d_tax,
    @o_id = d_next_o_id,
    d_next_o_id = d_next_o_id + 1,
    @o_entry_d = GETDATE(),
    @li_no = 0,
    @commit_flag = 1,
WHERE d_w_id = @w_id AND
      d_id = @d_id

-----
-- process orderlines
-----
WHILE (@li_no < @o_ol_cnt)
BEGIN
    SELECT @li_no = @li_no + 1

-----
-- set i_id, s_w_id, and qty for this lineitem
-----
SELECT @li_id = CASE @li_no
                WHEN 1 THEN @i_id1
                WHEN 2 THEN @i_id2
                WHEN 3 THEN @i_id3
                WHEN 4 THEN @i_id4
                WHEN 5 THEN @i_id5
                WHEN 6 THEN @i_id6
                WHEN 7 THEN @i_id7
                WHEN 8 THEN @i_id8
                WHEN 9 THEN @i_id9
                WHEN 10 THEN @i_id10
                WHEN 11 THEN @i_id11
                WHEN 12 THEN @i_id12
                WHEN 13 THEN @i_id13
                WHEN 14 THEN @i_id14
                WHEN 15 THEN @i_id15
                END,
        @li_s_w_id = CASE @li_no
                WHEN 1 THEN @s_w_id1
                WHEN 2 THEN @s_w_id2
                WHEN 3 THEN @s_w_id3
                WHEN 4 THEN @s_w_id4
```

```

        WHEN 5 THEN @s_w_id5
        WHEN 6 THEN @s_w_id6
        WHEN 7 THEN @s_w_id7
        WHEN 8 THEN @s_w_id8
        WHEN 9 THEN @s_w_id9
        WHEN 10 THEN @s_w_id10
        WHEN 11 THEN @s_w_id11
        WHEN 12 THEN @s_w_id12
        WHEN 13 THEN @s_w_id13
        WHEN 14 THEN @s_w_id14
        WHEN 15 THEN @s_w_id15
    END,

    @li_qty = CASE @li_no
        WHEN 1 THEN @ol_qty1
        WHEN 2 THEN @ol_qty2
        WHEN 3 THEN @ol_qty3
        WHEN 4 THEN @ol_qty4
        WHEN 5 THEN @ol_qty5
        WHEN 6 THEN @ol_qty6
        WHEN 7 THEN @ol_qty7
        WHEN 8 THEN @ol_qty8
        WHEN 9 THEN @ol_qty9
        WHEN 10 THEN @ol_qty10
        WHEN 11 THEN @ol_qty11
        WHEN 12 THEN @ol_qty12
        WHEN 13 THEN @ol_qty13
        WHEN 14 THEN @ol_qty14
        WHEN 15 THEN @ol_qty15
    END

-- get item data (no one updates item)
-----
SELECT @i_price = i_price,
       @i_name = i_name,
       @i_data = i_data
FROM item WITH (repeatableread)
WHERE i_id = @li_id

-----
-- update stock values
-----
UPDATE stock
SET s_ytd = s_ytd + @li_qty,
    @s_quantity = s_quantity -
s_quantity - @li_qty +
CASE WHEN
(s_quantity - @li_qty < 10) THEN 91 ELSE 0 END,
    s_order_cnt = s_order_cnt + 1,
    s_remote_cnt = s_remote_cnt +
CASE WHEN
(@li_s_w_id = @w_id) THEN 0 ELSE 1 END,
    @s_data = s_data,
    @s_dist = CASE @d_id
        WHEN 1 THEN
s_dist_01
        WHEN 2 THEN
s_dist_02
        WHEN 3 THEN
s_dist_03
        WHEN 4 THEN
s_dist_04
        WHEN 5 THEN
s_dist_05
        WHEN 6 THEN
s_dist_06
        WHEN 7 THEN
s_dist_07
        WHEN 8 THEN
s_dist_08

```

```

        WHEN 9 THEN
s_dist_09
        WHEN 10 THEN
s_dist_10
    END
WHERE s_i_id = @li_id AND
       s_w_id = @li_s_w_id

-----
-- if there actually is a stock (and item) with these
ids, go to work
-----
IF (@@rowcount > 0)
BEGIN
-----
-- insert order_line data (using data from item and
stock)
-----
INSERT INTO order_line VALUES( @o_id,
                                @d_id,
                                @w_id,
                                @li_no,
                                @li_id,
                                'dec 31,
1899',
                                @i_price *
@li_qty,
                                @li_s_w_id,
                                @li_qty,
                                @s_dist)

-----
-- send line-item data to client
-----
SELECT @i_name,
       @s_quantity,
       b_g = CASE WHEN (
(patindex('%ORIGINAL%',@i_data) > 0) AND
(patindex('%ORIGINAL%',@s_data) > 0) )
THEN 'B' ELSE 'G' END,
       @i_price,
       @i_price * @li_qty
END
ELSE
BEGIN
-----
-- no item (or stock) found - triggers rollback
condition
-----
SELECT '',0, '',0,0
SELECT @commit_flag = 0
END

-----
-- get customer last name, discount, and credit rating
-----
SELECT @c_last = c_last,
       @c_discount = c_discount,
       @c_credit = c_credit,
       @c_id_local = c_id
FROM customer WITH (repeatableread)
WHERE c_id = @c_id AND

```

```

       c_w_id = @w_id AND
       c_d_id = @d_id

-----
-- insert fresh row into orders table
-----
INSERT INTO orders VALUES ( @o_id,
                              @d_id,
                              @w_id,
                              @c_id_local,
                              0,
                              @c_ol_cnt,
                              @c_all_local,
                              @c_entry_d)

-----
-- insert corresponding row into new-order table
-----
INSERT INTO new_order VALUES ( @o_id,
                                @d_id,
                                @w_id)

-----
-- select warehouse tax
-----
SELECT @w_tax = w_tax
FROM warehouse WITH (repeatableread)
WHERE w_id = @w_id

IF (@commit_flag = 1)
    COMMIT TRANSACTION n
ELSE
-- all that work for nuthin!!!
ROLLBACK TRANSACTION n

-----
-- return order data to client
-----
SELECT @w_tax,
       @d_tax,
       @o_id,
       @c_last,
       @c_discount,
       @c_credit,
       @c_entry_d,
       @commit_flag

END
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

-----
--
-----

```

payment.sql

```

-- File: PAYMENT.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates payment stored procedure
--
-- Interface Level: 4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS ON
GO
USE tpcc
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_payment' )
DROP PROCEDURE tpcc_payment
GO
CREATE PROCEDURE tpcc_payment
    @w_id int,
    @c_w_id int,
    @h_amount smallmoney,
    @d_id tinyint,
    @c_d_id tinyint,
    @c_id int,
    @c_last char(16) = ""
AS
DECLARE @w_street_1 char(20),
        @w_street_2 char(20),
        @w_city char(20),
        @w_state char(2),
        @w_zip char(9),
        @w_name char(10),
        @d_street_1 char(20),
        @d_street_2 char(20),
        @d_city char(20),
        @d_state char(2),
        @d_zip char(9),
        @d_name char(10),
        @c_first char(16),
        @c_middle char(2),
        @c_street_1 char(20),
        @c_street_2 char(20),
        @c_city char(20),
        @c_state char(2),
        @c_zip char(9),
        @c_phone char(16),
        @c_since datetime,
        @c_credit char(2),
        @c_credit_lim money,
        @c_balance money,
        @c_discount smallmoney,
        @c_data char(42),
        @datetime datetime,
        @w_ytd money,
        @d_ytd money,

```

```

        @cnt smallint,
        @val smallint,
        @screen_data char(200),
        @d_id_local tinyint,
        @w_id_local int,
        @c_id_local int
SELECT @screen_data = ""
BEGIN TRANSACTION p
-- get payment date
SELECT @datetime = GETDATE()
IF (@c_id = 0)
BEGIN
-- get customer id and info using last name
SELECT @cnt = COUNT(*)
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id
SELECT @val = (@cnt + 1) / 2
SET rowcount @val
SELECT @c_id = c_id
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id
ORDER BY c_last, c_first
SET rowcount 0
END
-- get customer info and update balances
UPDATE customer
SET @c_balance = c_balance = c_balance -
@h_amount,
    c_payment_cnt = c_payment_cnt + 1,
    c_ytd_payment = c_ytd_payment +
@h_amount,
    @c_first = c_first,
    @c_middle = c_middle,
    @c_last = c_last,
    @c_street_1 = c_street_1,
    @c_street_2 = c_street_2,
    @c_city = c_city,
    @c_state = c_state,
    @c_zip = c_zip,
    @c_phone = c_phone,
    @c_credit = c_credit,
    @c_credit_lim = c_credit_lim,
    @c_discount = c_discount,
    @c_since = c_since,
    @c_id_local = c_id
WHERE c_id = @c_id AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id
-- if customer has bad credit get some more info
IF (@c_credit = "BC")
BEGIN
-- compute new info
SELECT @c_data = convert(char(5),@c_id) +
convert(char(4),@c_d_id) +
convert(char(5),@c_w_id) +
convert(char(4),@d_id) +

```

```

convert(char(5),@w_id) +
convert(char(19),@h_amount)
-- update customer info
UPDATE customer
SET c_data = @c_data +
substring(c_data, 1, 458),
    @screen_data = @c_data +
substring(c_data, 1, 158)
WHERE c_id = @c_id AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id
END
-- get district data and update year-to-date
UPDATE district
SET d_ytd = d_ytd + @h_amount,
    @d_street_1 = d_street_1,
    @d_street_2 = d_street_2,
    @d_city = d_city,
    @d_state = d_state,
    @d_zip = d_zip,
    @d_name = d_name,
    @d_id_local = d_id
WHERE d_w_id = @w_id AND
      d_id = @d_id
-- get warehouse data and update year-to-date
UPDATE warehouse
SET w_ytd = w_ytd + @h_amount,
    @w_street_1 = w_street_1,
    @w_street_2 = w_street_2,
    @w_city = w_city,
    @w_state = w_state,
    @w_zip = w_zip,
    @w_name = w_name,
    @w_id_local = w_id
WHERE w_id = @w_id
-- create history record
INSERT INTO history VALUES
(@c_id_local,
 @c_d_id,
 @c_w_id,
 @d_id_local,
 @w_id_local,
 @datetime,
 @h_amount,
 @w_name + ' ' +
@d_name)
COMMIT TRANSACTION p
-- return data to client
SELECT @c_id,
       @c_last,
       @datetime,
       @w_street_1,
       @w_street_2,
       @w_city,
       @w_state,
       @w_zip,
       @d_street_1,
       @d_street_2,
       @d_city,
       @d_state,
       @d_zip,
       @c_first,
       @c_middle,
       @c_street_1,
       @c_street_2,
       @c_city,

```



```

@c_state,
@c_zip,
@c_phone,
@c_since,
@c_credit,
@c_credit_lim,
@c_discount,
@c_balance,
@screen_data

GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

```

ordstat.sql

```

-----
--
-- File:   ORDSTAT.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates order status stored procedure
--
--
-- Interface Level:   4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_orderstatus' )
    DROP PROCEDURE tpcc_orderstatus
GO

CREATE PROCEDURE    tpcc_orderstatus
    @w_id            int,
    @d_id            tinyint,

    @c_id            int,
    @c_last          char(16) = ''

AS
DECLARE @c_balance  money,
        @c_first    char(16),
        @c_middle   char(2),

```

```

@o_id            int,
@o_entry_d       datetime,
@o_carrier_id    smallint,
@cnt             smallint

BEGIN TRANSACTION o
IF (@c_id = 0)
BEGIN
-----
-- get customer id and info using last name
-----
SELECT @cnt = (count(*)+1)/2
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
      c_w_id = @w_id AND
      c_d_id = @d_id

SET rowcount @cnt

SELECT @c_id = c_id,
       @c_balance = c_balance,
       @c_first = c_first,
       @c_last = c_last,
       @c_middle = c_middle
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
      c_w_id = @w_id AND
      c_d_id = @d_id

ORDER BY c_w_id, c_d_id, c_last, c_first

SET rowcount 0
END
ELSE
BEGIN
-----
-- get customer info if by id
-----
SELECT @c_balance = c_balance,
       @c_first = c_first,
       @c_middle = c_middle,
       @c_last = c_last
FROM customer WITH (repeatableread)
WHERE c_id = @c_id AND
      c_d_id = @d_id AND
      c_w_id = @w_id

SELECT @cnt = @@rowcount
END

-----
-- if no such customer
-----
IF (@cnt = 0)
BEGIN
    RAISERROR('Customer not found',18,1)
    GOTO custnotfound
END

-----
-- get order info
-----
SELECT @o_id = o_id,
       @o_entry_d = o_entry_d,
       @o_carrier_id = o_carrier_id

FROM orders WITH (serializable)
WHERE o_c_id = @c_id AND
      o_d_id = @d_id AND
      o_w_id = @w_id

ORDER BY o_id ASC
-----

```

```

-- select order lines for the current order
-----
SELECT ol_supply_w_id,
       ol_i_id,
       ol_quantity,
       ol_amount,
       ol_delivery_d
FROM order_line WITH (repeatableread)
WHERE ol_o_id = @o_id AND
      ol_d_id = @d_id AND
      ol_w_id = @w_id

custnotfound:

COMMIT TRANSACTION o

-----
-- return data to client
-----
SELECT @c_id,
       @c_last,
       @c_first,
       @c_middle,

       @o_entry_d,
       @o_carrier_id,
       @c_balance,
       @o_id

GO

```

delivery.sql

```

-----
--
-- File:   DELIVERY.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates delivery stored procedure
--
--
-- Interface Level:   4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_delivery' )
    DROP PROCEDURE tpcc_delivery
GO

```

```

CREATE PROC tpcc_delivery
    @w_id          int,
    @o_carrier_id  smallint
AS
DECLARE @d_id      tinyint,
        @o_id      int,
        @c_id      int,
        @total     money,
        @oid1      int,
        @oid2      int,
        @oid3      int,
        @oid4      int,
        @oid5      int,
        @oid6      int,
        @oid7      int,
        @oid8      int,
        @oid9      int,
        @oid10     int

SELECT @d_id = 0
BEGIN TRANSACTION d
WHILE (@d_id < 10)
    BEGIN
        SELECT @d_id = @d_id + 1,
               @total = 0,
               @o_id = 0

        SELECT TOP 1
            @o_id = no_o_id
        FROM new_order WITH (serializable uplock)
        WHERE no_w_id = @w_id AND
              no_d_id = @d_id
        ORDER BY no_o_id ASC

        IF (@@rowcount <> 0)
            BEGIN
                -- claim the order for this district
                DELETE new_order
                WHERE no_w_id = @w_id AND
                      no_d_id = @d_id AND
                      no_o_id = @o_id

                -- set carrier_id on this order (and get
customer id)
                UPDATE orders
                SET o_carrier_id = @o_carrier_id,
                    @c_id = o_c_id
                WHERE o_w_id = @w_id AND
                      o_d_id = @d_id AND
                      o_id = @o_id

                -- set date in all lineitems for this
order (and sum amounts)
                UPDATE order_line
                SET ol_delivery_d = GETDATE(),
                    @total = @total +
ol_amount
                WHERE ol_w_id = @w_id AND
                      ol_d_id = @d_id AND
                      ol_o_id = @o_id

                -- accumulate lineitem amounts for this
order into customer
                UPDATE customer
                SET c_balance = c_balance +
@total,

```

```

1          c_delivery_cnt = c_delivery_cnt +
          WHERE c_w_id      = @w_id AND
                c_d_id      = @d_id AND
                c_id        = @c_id
          END

          SELECT @oid1 = CASE @d_id WHEN 1 THEN @o_id
          ELSE @oid1 END,
          SELECT @oid2 = CASE @d_id WHEN 2 THEN @o_id
          ELSE @oid2 END,
          SELECT @oid3 = CASE @d_id WHEN 3 THEN @o_id
          ELSE @oid3 END,
          SELECT @oid4 = CASE @d_id WHEN 4 THEN @o_id
          ELSE @oid4 END,
          SELECT @oid5 = CASE @d_id WHEN 5 THEN @o_id
          ELSE @oid5 END,
          SELECT @oid6 = CASE @d_id WHEN 6 THEN @o_id
          ELSE @oid6 END,
          SELECT @oid7 = CASE @d_id WHEN 7 THEN @o_id
          ELSE @oid7 END,
          SELECT @oid8 = CASE @d_id WHEN 8 THEN @o_id
          ELSE @oid8 END,
          SELECT @oid9 = CASE @d_id WHEN 9 THEN @o_id
          ELSE @oid9 END,
          SELECT @oid10 = CASE @d_id WHEN 10 THEN @o_id
          ELSE @oid10 END
          END

COMMIT TRANSACTION d

-- return delivery data to client

SELECT @oid1,
       @oid2,
       @oid3,
       @oid4,
       @oid5,
       @oid6,
       @oid7,
       @oid8,
       @oid9,
       @oid10
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

```

stocklev.sql

```

-----
--
-- File: STOCKLEV.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates stock level stored procedure
--

```

```

--
-- Interface Level: 4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_stocklevel' )
    DROP PROCEDURE tpcc_stocklevel
GO

CREATE PROCEDURE tpcc_stocklevel
    @w_id          int,
    @d_id          tinyint,
    @threshold     smallint
AS
DECLARE @o_id_low int,
        @o_id_high int

SELECT @o_id_low = (d_next_o_id - 20),
       @o_id_high = (d_next_o_id - 1)
FROM district
WHERE d_w_id = @w_id AND
      d_id = @d_id

SELECT COUNT(DISTINCT(s_i_id))
FROM stock,
order_line
WHERE ol_w_id = @w_id AND
      ol_d_id = @d_id and
      ol_o_id BETWEEN @o_id_low AND
                  @o_id_high AND
      s_w_id = ol_w_id AND
      s_i_id = ol_i_id AND
      s_quantity < @threshold
OPTION(ORDER GROUP)
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

// File: TPCC.H Microsoft TPC-C
// Kit Ver. 4.51

```

Loader Source Code

tpcc.h

```

// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2003, 2005
// Purpose: Header file for TPC-C database
// loader

// Build number of TPC Benchmark Kit
#define TPCKIT_VER "4.51"

// General headers
#include <windows.h>
#include <winbase.h>
#include <stdlib.h>
#include <stdio.h>
#include <process.h>
#include <stddef.h>
#include <stdarg.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <sys\types.h>
#include <math.h>

// ODBC headers
#include <sql.h>
#include <sqlext.h>
#include <odbcss.h>

// General constants
#define MILLI 1000
#define FALSE 0
#define TRUE 1
#define UNDEF -1
#define MINPRINTASCII 32
#define MAXPRINTASCII 126

// Default environment constants
#define SERVER ""
#define DATABASE "tpcc"
#define USER "sa"
#define PASSWORD ""

// Default loader arguments
#define BATCH 10000
#define DEFLDPAKSIZE 32768
#define LOADER_RES_FILE "C:\\MSTPCC.450\\SETUP\\LOGS\\load.out"
#define LOADER_LOG_PATH "C:\\MSTPCC.450\\SETUP\\LOGS\\"
#define LOADER_NURAND_C 123
#define DEF_STARTING_WAREHOUSE 1
#define BUILD_INDEX 1 // build both data and indexes
#define INDEX_ORDER 1 // build indexes before load
#define SCALE_DOWN 0 // build a normal scale database
#define INDEX_SCRIPT_PATH "scripts"

typedef struct
{
    char *server;
    char *database;
}

```

```

char *user;
char *password;
BOOL tables_all; // set if loading all tables
BOOL table_item; // set if loading ITEM table specifically
WAREHOUSE, DISTRICT, and STOCK
BOOL table_warehouse; // set if loading
BOOL table_customer; // set if loading CUSTOMER and HISTORY
BOOL table_orders; // set if loading NEW-ORDER, ORDERS, ORDER-LINE
long num_warehouses;
long batch;
long verbose;
long pack_size;
char *loader_res_file;
char *log_path;
char *synch_servername;
long case_sensitivity;
long starting_warehouse;
long build_index;
long index_order;
long scale_down;
char *index_script_path;
} TPCCCLR_ARGS;

// String length constants
#define SERVER_NAME_LEN 20
#define DATABASE_NAME_LEN 20
#define USER_NAME_LEN 20
#define PASSWORD_LEN 20
#define TABLE_NAME_LEN 20
#define I_DATA_LEN 50
#define I_NAME_LEN 24
#define BRAND_LEN 1
#define LAST_NAME_LEN 16
#define W_NAME_LEN 10
#define ADDRESS_LEN 20
#define STATE_LEN 2
#define ZIP_LEN 9
#define S_DIST_LEN 24
#define S_DATA_LEN 50
#define D_NAME_LEN 10
#define FIRST_NAME_LEN 16
#define MIDDLE_NAME_LEN 2
#define PHONE_LEN 16
#define CREDIT_LEN 2
#define C_DATA_LEN 500
#define H_DATA_LEN 24
#define DIST_INFO_LEN 24
#define MAX_OL_NEW_ORDER_ITEMS 15

```

```

#define MAX_OL_ORDER_STATUS_ITEMS 15
#define STATUS_LEN 25
#define OL_DIST_INFO_LEN 24

#define C_SINCE_LEN 23
#define H_DATE_LEN 23
#define OL_DELIVERY_D_LEN 23
#define O_ENTRY_D_LEN 23

// Functions in random.c
void seed();
long irand();
double drand();
void WUCreate();
short WURand();
long RandomNumber(long lower, long upper);

// Functions in getargs.c
void GetArgsLoader();
void GetArgsLoaderUsage();

// Functions in time.c
long TimeNow();

// Functions in strings.c
void MakeAddress();
void LastName();
int MakeAlphaString();
int MakeAlphaStringPadded();
int MakeOriginalAlphaString();
int MakeNumberString();
int MakeZipNumberString();
void InitString();
void InitAddress();
void PaddString();

```

tpccldr.c

```

//=====
// File: TPCCCLR.C
// Kit Ver. 4.51 Microsoft TPC-C
// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001,
// 2002, 2003
// Purpose: Source file for TPC-C database
// loader
//=====
// Includes
#include "tpcc.h"
#include "search.h"

// Defines
#define MAXITEMS 100000
#define MAXITEMS_SCALE_DOWN 100
#define CUSTOMERS_PER_DISTRICT 3000
#define CUSTOMERS_SCALE_DOWN 30
#define DISTRICT_PER_WAREHOUSE 10
#define ORDERS_PER_DISTRICT 3000
#define ORDERS_SCALE_DOWN 30

```

```

#define MAX_CUSTOMER_THREADS 2
#define MAX_ORDER_THREADS 3
#define MAX_MAIN_THREADS 4
#define MAX_SQL_ERRORS 10

// Functions declarations
void HandleErrorDBC (SQLHDBC hdbc1);
long NURand();
void LoadItem();
void LoadWarehouse();
void Stock();
void District();
void LoadCustomer();
void CustomerBufInit();
void CustomerBufLoad();
void LoadCustomerTable();
void LoadHistoryTable();
void LoadOrders();
void OrdersBufInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void CheckForCommit_Big();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures
typedef struct
{
    long double ol_i_id; ol;
    long ol_supply_w_id;
    short ol_quantity;
    double ol_amount;
    char ol_dist_info[DIST_INFO_LEN+1];
    char ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long o_id;
    short o_d_id;
    long o_w_id;
    long o_c_id;
    short o_carrier_id;
    short o_ol_cnt;
    short o_all_local;
    ORDER_LINE_STRUCT o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long c_id;
    short c_d_id;
    long c_w_id;
    char c_first[FIRST_NAME_LEN+1];
    char c_middle[MIDDLE_NAME_LEN+1];
    char c_last[LAST_NAME_LEN+1];
    char c_street_1[ADDRESS_LEN+1];

```

```

char c_street_2[ADDRESS_LEN+1];
char c_city[ADDRESS_LEN+1];
char c_state[STATE_LEN+1];
char c_zip[ZIP_LEN+1];
char c_phone[PHONE_LEN+1];
char c_credit[CREDIT_LEN+1];
double c_credit_lim;
double c_discount;
char c_balance[6];
double c_ytd_payment;
short c_payment_cnt;
short c_delivery_cnt;
char c_data[C_DATA_LEN+1];
double h_amount;
char h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{
    char c_last[LAST_NAME_LEN+1];
    char c_first[FIRST_NAME_LEN+1];
    long c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long time_start;
} LOADER_TIME_STRUCT;

// Global variables
char szLastError[300];
HENV henv;
HDBC v_hdbc;

verification
HDBC i_hdbc1;
HDBC w_hdbc1;
HDBC c_hdbc1;
HDBC c_hdbc2;
HDBC o_hdbc1;
HDBC o_hdbc2;
HDBC o_hdbc3;
// for ORDER-LINE

```

```

HSTMT v_hstmt;
// for SQL Server version verification
HSTMT i_hstmt1;
HSTMT w_hstmt1;
HSTMT c_hstmt1, c_hstmt2;
HSTMT o_hstmt1, o_hstmt2, o_hstmt3;

int total_db_errors;

ORDERS_STRUCT orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT customer_buf[CUSTOMERS_PER_DISTRICT];
long orders_rows_loaded;
double new_order_rows_loaded;
double order_line_rows_loaded;
long history_rows_loaded;
long customer_rows_loaded;
double stock_rows_loaded;
long district_rows_loaded;
long item_rows_loaded;
long warehouse_rows_loaded;
long main_time_start;
long main_time_end;
long max_items;
long customers_per_district;
long orders_per_district;
long first_new_order;
long last_new_order;

TPCC_LDR_ARGS *aptr, args;

//=====
// Function name: main
//=====
int main(int argc, char **argv)
{
    DWORD dwThreadID[MAX_MAIN_THREADS];
    HANDLE hThread[MAX_MAIN_THREADS];
    FILE *fLoader;
    char buffer[255];
    int i;

    for (i=0; i<MAX_MAIN_THREADS; i++)
        hThread[i] = NULL;

    printf("\n*****\n");
    printf("\n*");
    printf("\n* Microsoft SQL Server");
    printf("\n*");
    printf("\n* TPC-C BENCHMARK KIT: Database loader");
    printf("\n*");
    printf("\n* TPCKIT_VER);
    printf("\n*");
    printf("\n*****\n\n");

    // process command line arguments
    aptr = &args;
    GetArgsLoader(argc, argv, aptr);

```

```

printf("Build interface is ODBC.\n");
if (aptr->build_index == 0)
    printf("Data load only - no index
creation.\n");
else
    printf("Data load and index
creation.\n");
if (aptr->index_order == 0)
    printf("Clustered indexes will be
created after bulk load.\n");
else
    printf("Clustered indexes will be
created before bulk load.\n");
// set database scale values
if (aptr->scale_down == 1)
{
    printf("*** Scaled Down Database
***\n");
    max_items = MAXITEMS_SCALE_DOWN;
    customers_per_district =
CUSTOMERS_SCALE_DOWN;
    orders_per_district =
ORDERS_SCALE_DOWN;
    first_new_order = 0;
    last_new_order = 30;
}
else
{
    max_items = MAXITEMS;
    customers_per_district =
CUSTOMERS_PER_DISTRICT;
    orders_per_district =
ORDERS_PER_DISTRICT;
    first_new_order = 2100;
    last_new_order = 3000;
}
// open connections to SQL Server
OpenConnections();
// open file for loader results
fLoader = fopen(aptr->loader_res_file, "w");
if (fLoader == NULL)
{
    printf("Error, loader result file
open failed.");
    exit(-1);
}
// start loading data
sprintf(buffer, "TPC-C load started for %ld
warehouses.\n", aptr->num_warehouses);
if (aptr->scale_down == 1)
{
    sprintf(buffer, "SCALED DOWN
DATABASE.\n");
}
printf("%s", buffer);
fprintf(fLoader, "%s", buffer);
main_time_start = (TimeNow() / MILLI);
// start parallel load threads
if (aptr->tables_all || aptr->table_item)
{

```

```

        fprintf(fLoader, "\nStarting loader
threads for: item\n");
        hThread[0] = CreateThread(NULL,
            0,
            (LPTHREAD_START_ROUTINE) LoadItem,
            NULL,
            0,
            &dwThreadID[0]);
        if (hThread[0] == NULL)
        {
            printf("Error, failed in
creating creating thread = 0.\n");
            exit(-1);
        }
        if (aptr->tables_all || aptr->
table_warehouse)
        {
            fprintf(fLoader, "Starting loader
threads for: warehouse\n");
            hThread[1] = CreateThread(NULL,
                0,
                (LPTHREAD_START_ROUTINE) LoadWarehouse,
                NULL,
                0,
                &dwThreadID[1]);
            if (hThread[1] == NULL)
            {
                printf("Error, failed in
creating creating thread = 1.\n");
                exit(-1);
            }
            if (aptr->tables_all || aptr->table_customer)
            {
                fprintf(fLoader, "Starting loader
threads for: customer\n");
                hThread[2] = CreateThread(NULL,
                    0,
                    (LPTHREAD_START_ROUTINE) LoadCustomer,
                    NULL,
                    0,
                    &dwThreadID[2]);
                if (hThread[2] == NULL)
                {

```

```

                    printf("Error, failed in
creating creating main thread
= 2.\n");
                    exit(-1);
                }
            }
            if (aptr->tables_all || aptr->table_orders)
            {
                fprintf(fLoader, "Starting loader
threads for: orders\n");
                hThread[3] = CreateThread(NULL,
                    0,
                    (LPTHREAD_START_ROUTINE) LoadOrders,
                    NULL,
                    0,
                    &dwThreadID[3]);
                if (hThread[3] == NULL)
                {
                    printf("Error, failed in
creating creating main thread
= 3.\n");
                    exit(-1);
                }
            }
            // Wait for threads to finish...
            for (i=0; i<MAX_MAIN_THREADS; i++)
            {
                if (hThread[i] != NULL)
                {
                    WaitForSingleObject(
hThread[i], INFINITE );
                    CloseHandle(hThread[i]);
                    hThread[i] = NULL;
                }
            }
            main_time_end = (TimeNow() / MILLI);
            sprintf(buffer, "\nTPC-C load completed successfully
in %ld minutes.\n",
                (main_time_end -
main_time_start)/60);
            printf("%s", buffer);
            fprintf(fLoader, "%s", buffer);
            fclose(fLoader);
            SQLFreeEnv(henv);
            exit(0);
            return 0;
        }
}
//=====
//
// Function name: LoadItem
//
//=====
void LoadItem()

```

```

{
int          i;
long         i_id;
long         i_im_id;
char         i_name[I_NAME_LEN+1];
double      i_price;
char         i_data[I_DATA_LEN+1];
char         name[20];
long         time_start;
RETCODE     rc;
DBINT       rcint;
char         bcphint[128];
char         err_log_path[256];

// Seed with unique number
seed(11);

printf("Loading item table...\n");

//if build index before load
if ((aptr->build_index == 1) && (aptr->index_order == 1))
    BuildIndex("idxitmcl");

InitString(i_name, I_NAME_LEN+1);
InitString(i_data, I_DATA_LEN+1);
sprintf(name, "%s..%s", aptr->database, "item");

strcpy(err_log_path, aptr->log_path);
strcat(err_log_path, "item.err");
rc = bcp_init(i_hdbc1, name, NULL, err_log_path, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (i_id), ROWS_PER_BATCH = 100000");
    rc = bcp_control(i_hdbc1, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
}

i = 0;
rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);
rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0, I_NAME_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);
rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);
rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0, SQL_VARLEN_DATA, "", 1, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);
rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

time_start = (TimeNow() / MILLI);

```

```

item_rows_loaded = 0;
for (i_id = 1; i_id <= max_items; i_id++)
{
    i_im_id = RandomNumber(1L, 10000L);
    MakeAlphaStringPadded(14, 24, I_NAME_LEN, i_name);
    i_price = ((float) RandomNumber(100L, 10000L))/100.0;
    MakeOriginalAlphaString(26, 50, I_DATA_LEN, i_data, 10);
    rc = bcp_sendrow(i_hdbc1);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    item_rows_loaded++;
    CheckForCommit(i_hdbc1, i_hstmt1, item_rows_loaded, "item", &time_start);
}

rcint = bcp_done(i_hdbc1);
if (rcint < 0)
    HandleErrorDBC(i_hdbc1);

printf("Finished loading item table.\n");

SQLFreeStmt(i_hstmt1, SQL_DROP);
SQLDisconnect(i_hdbc1);
SQLFreeConnect(i_hdbc1);

// if build index after load
if ((aptr->build_index == 1) && (aptr->index_order == 0))
    BuildIndex("idxitmcl");
}

//=====
//
// Function : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District as Warehouses are created
//
//=====
void LoadWarehouse()
{
    int          i;
    long         w_id;
    char         w_name[W_NAME_LEN+1];
    char         w_street_1[ADDRESS_LEN+1];
    char         w_street_2[ADDRESS_LEN+1];
    char         w_city[ADDRESS_LEN+1];
    char         w_state[STATE_LEN+1];
    char         w_zip[ZIP_LEN+1];
    double      w_tax;
    double      w_ytd;
    char         name[20];
    long         time_start;
    RETCODE     rc;
    DBINT       rcint;
    char         bcphint[128];
    char         err_log_path[256];

```

```

// Seed with unique number
seed(2);

printf("Loading warehouse table...\n");

// if build index before load...
if ((aptr->build_index == 1) && (aptr->index_order == 1))
    BuildIndex("idxwarcl");

InitString(w_name, W_NAME_LEN+1);
InitAddress(w_street_1, w_street_2, w_city, w_state, w_zip);

sprintf(name, "%s..%s", aptr->database, "warehouse");

strcpy(err_log_path, aptr->log_path);
strcat(err_log_path, "warehouse.err");
rc = bcp_init(w_hdbc1, name, NULL, err_log_path, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (w_id), ROWS_PER_BATCH = %d", aptr->num_warehouses);
    rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
}

i = 0;
rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0, W_NAME_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1, 0, ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2, 0, ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0, ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0, STATE_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0, ZIP_LEN, NULL, 0, 0, ++i);

```

```

if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

time_start = (TimeNow() / MILLI);
warehouse_rows_loaded = 0;

for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
{
    MakeAlphaStringPadded(6,10,
W_NAME_LEN, w_name);
    MakeAddress(w_street_1, w_street_2,
w_city, w_state, w_zip);

    w_tax = ((float)
RandomNumber(0L,2000L))/10000.00;
    w_ytd = 300000.00;

    rc = bcp_sendrow(w_hdbc1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

    warehouse_rows_loaded++;
    CheckForCommit(w_hdbc1, i_hstmt1,
warehouse_rows_loaded, "warehouse", &time_start);
}

rcint = bcp_done(w_hdbc1);
if (rcint < 0)
    HandleErrorDBC(w_hdbc1);

printf("Finished loading warehouse
table.\n");

// if build index after load...
if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
    BuildIndex("idxwarc1");

stock_rows_loaded = 0;
district_rows_loaded = 0;

District();
Stock();
}

//=====
//
// Function : District
//=====
void District()
{
    int i;
    short d_id;
    long d_w_id;
    char d_name[D_NAME_LEN+1];
    char d_street_1[ADDRESS_LEN+1];
    char d_street_2[ADDRESS_LEN+1];
    char d_city[ADDRESS_LEN+1];
    char d_state[STATE_LEN+1];
    char d_zip[ZIP_LEN+1];
    double d_tax;
    double d_ytd;
    char name[20];
    long d_next_o_id;

```

```

long time_start;
long w_id;
RETCODE rc;
DBINT rcint;
char bcpint[128];
char err_log_path[256];

// Seed with unique number
seed(4);

printf("Loading district table...\n");

// build index before load
if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    BuildIndex("idxdiscl");

InitString(d_name, D_NAME_LEN+1);
InitAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);
sprintf(name, "%s.%s", aptr->database,
"district");

strcpy(err_log_path, aptr->log_path);
strcat(err_log_path, "district.err");
rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
{
    sprintf(bcpint, "tablock, order
(d_w_id, d_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 10));
    rc = bcp_control(w_hdbc1, BCPHINTS,
(void*) bcpint);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
}

i = 0;
rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0,
D_NAME_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

```

```

rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

d_ytd = 30000.00;
d_next_o_id = orders_per_district+1;
time_start = (TimeNow() / MILLI);

for (w_id = aptr->starting_warehouse; w_id <=
aptr->num_warehouses; w_id++)
{
    d_w_id = w_id;
    for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
    {
        MakeAlphaStringPadded(6,10,D_NAME_LEN,
d_name);
        MakeAddress(d_street_1,
d_street_2, d_city, d_state, d_zip);
        d_tax = ((float)
RandomNumber(0L,2000L))/10000.00;
        rc =
bcp_sendrow(w_hdbc1);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        district_rows_loaded++;
        CheckForCommit(w_hdbc1,
&i_hstmt1, district_rows_loaded, "district",
&time_start);
    }

    rcint = bcp_done(w_hdbc1);
    if (rcint < 0)
        HandleErrorDBC(w_hdbc1);

    printf("Finished loading district table.\n");

    // if build index after load...
    if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
        BuildIndex("idxdiscl");

    return;
}

//=====
//

```

```

// Function : Stock
//
//=====
void Stock()
{
    int          i;
    long         s_i_id;
    long         s_w_id;
    short        s_quantity;
    char         s_dist_01[S_DIST_LEN+1];
    char         s_dist_02[S_DIST_LEN+1];
    char         s_dist_03[S_DIST_LEN+1];
    char         s_dist_04[S_DIST_LEN+1];
    char         s_dist_05[S_DIST_LEN+1];
    char         s_dist_06[S_DIST_LEN+1];
    char         s_dist_07[S_DIST_LEN+1];
    char         s_dist_08[S_DIST_LEN+1];
    char         s_dist_09[S_DIST_LEN+1];
    char         s_dist_10[S_DIST_LEN+1];
    long         s_ytd;
    short        s_order_cnt;
    short        s_remote_cnt;
    char         s_data[S_DATA_LEN+1];
    short        len;
    char         name[20];
    long         time_start;
    RETCODE      rc;
    DBINT        rcint;
    char         bcphint[128];
    char         err_log_path[256];

    // Seed with unique number
    seed(3);

    // if build index before load..
    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        BuildIndex("idxstkcl");

    sprintf(name, "%s.%s", aptr->database,
"stock");

    strcpy(err_log_path, aptr->log_path);
    strcat(err_log_path, "stock.err");
    rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        sprintf(bcphint, "tablock, order
(s_i_id, s_w_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 100000));
        rc = bcp_control(w_hdbc1, BCPHINTS,
(void*) bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
    }

    i = 0;
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

```

```

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *)
&s_remote_cnt, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

    s_ytd = s_order_cnt = s_remote_cnt = 0;
    time_start = (TimeNow() / MILLI);
    printf("...Loading stock table\n");
    for (s_i_id=1; s_i_id <= max_items; s_i_id++)
    {

```

```

        for (s_w_id = (long)aptr-
>starting_warehouse; s_w_id <= aptr->num_warehouses;
s_w_id++)
        {
            s_quantity =
(short)RandomNumber(10L,100L);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
            len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

            len =
MakeOriginalAlphaString(26,50, S_DATA_LEN, s_data,10);

            rc =
bcp_sendrow(w_hdbc1);
            if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
            stock_rows_loaded++;

            CheckForCommit_Big(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);
        }

        rcint = bcp_done(w_hdbc1);
        if (rcint < 0)
            HandleErrorDBC(w_hdbc1);

        printf("Finished loading stock table.\n");
        SQLFreeStmt(w_hstmt1, SQL_DROP);
        SQLDisconnect(w_hdbc1);
        SQLFreeConnect(w_hdbc1);

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
            BuildIndex("idxstkcl");

        return;
    }
}
//=====
//
// Function : LoadCustomer
//=====
void LoadCustomer()
{

```



```

    LOADER_TIME_STRUCT    customer_time_start;
    LOADER_TIME_STRUCT    history_time_start;
    long
    w_id;
short
    d_id;
    DWORD
    dwThreadId[MAX_CUSTOMER_THREADS];
    HANDLE
    hThread[MAX_CUSTOMER_THREADS];
    char
    name[20];
    RETCODE
    rc;
    DBINT
    rcint;
    char
    bcphint[128];
    char
    cmd[256];
    int
    num_procs;
    char
    err_log_path_cust[256];
    char
    err_log_path_hist[256];

    // Seed with unique number
    seed(5);

    printf("Loading customer and history
tables...\n");

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        BuildIndex("idxcuscl");
        // check the number of processors
on this system
        // if 8 or more processors, then
build index on History.
        // if less than 8 processors, do
not build the index
        num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS"));
        if ( num_procs >= 8 )
            BuildIndex("idxhiscl");
    }

    // Initialize bulk copy
    sprintf(name, "%s.%s", aptr->database,
"customer");

    strcpy(err_log_path_cust,aptr->log_path);
    strcat(err_log_path_cust,"customer.err");
    rc = bcp_init(c_hdbc1, name, NULL,
err_log_path_cust, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        sprintf(bcphint, "tablock, order
(c_w_id, c_d_id, c_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
        rc = bcp_control(c_hdbc1, BCPHINTS,
(void*) bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(c_hdbc1);
    }

```

```

        sprintf(name, "%s.%s", aptr->database,
"history");
        rc = bcp_init(c_hdbc2, name, NULL,
"logs\\history.err", DB_IN);
        strcpy(err_log_path_hist,aptr->log_path);
        strcat(err_log_path_hist,"history.err");
        rc = bcp_init(c_hdbc2, name, NULL,
err_log_path_hist, DB_IN);
        if (rc != SUCCEED)
            HandleErrorDBC(c_hdbc2);

        sprintf(bcphint, "tablock");
        rc = bcp_control(c_hdbc2, BCPHINTS, (void*)
bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(c_hdbc2);

        customer_rows_loaded = 0;
        history_rows_loaded = 0;
        CustomerBufInit();

        customer_time_start.time_start = (TimeNow() /
MILLI);
        history_time_start.time_start = (TimeNow() /
MILLI);

        for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
        {
            for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
            {
                CustomerBufLoad(d_id,
w_id);

                // Start parallel loading
threads here...
                // Start customer table
thread
                printf("...Loading
customer table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                hThread[0] =
CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadCustomerTable,
&customer_time_start,
0,
&dwThreadId[0]);

                if (hThread[0] == NULL)
                {
                    printf("Error,
failed in creating creating thread = 0.\n");
                    exit(-1);
                }

                // Start History table
thread

```

```

                printf("...Loading
history table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                hThread[1] =
CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadHistoryTable,
&history_time_start,
0,
&dwThreadId[1]);

                if (hThread[1] == NULL)
                {
                    printf("Error,
failed in creating creating thread = 1.\n");
                    exit(-1);
                }

                WaitForSingleObject(
hThread[0], INFINITE );
                WaitForSingleObject(
hThread[1], INFINITE );

                if
                (CloseHandle(hThread[0]) == FALSE)
                {
                    printf("Error,
failed in closing customer thread handle with errno:
%d\n", GetLastError());
                }

                if
                (CloseHandle(hThread[1]) == FALSE)
                {
                    printf("Error,
failed in closing history thread handle with errno:
%d\n", GetLastError());
                }
            }
        }

        // flush the bulk connection
        rcint = bcp_done(c_hdbc1);
        if (rcint < 0)
            HandleErrorDBC(c_hdbc1);

        rcint = bcp_done(c_hdbc2);
        if (rcint < 0)
            HandleErrorDBC(c_hdbc2);

        printf("Finished loading customer table.\n");

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
        {
            BuildIndex("idxcuscl");
            // check the number of processors
on this system
            // if 8 or more processors, then
build index on History.

```

```

// if less than 8 processors, do
not build the index
num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
if (num_procs >= 8)
    BuildIndex("idxhiscl");
}

// build non-clustered index
if (aptr->build_index == 1)
    BuildIndex("idxcusnc");

// Output the NURAND used for the loader into
C_FIRST for C_ID = 1,
// C_W_ID = 1, and C_D_ID = 1
sprintf(cmd, "osql -S%s -U%s -P%s -d%s -e -
Q\\update customer set c_first = 'C_LOAD = %d' where
c_id = 1 and c_w_id = 1 and c_d_id = 1\\ " >
%snurand_load.log",

aptr->server,
aptr->user,
aptr->password,
aptr->database,

LOADER_NURAND_C, aptr-
>log_path);

system(cmd);

SQLFreeStmt(c_hstmt1, SQL_DROP);
SQLDisconnect(c_hdbc1);
SQLFreeConnect(c_hdbc1);

SQLFreeStmt(c_hstmt2, SQL_DROP);
SQLDisconnect(c_hdbc2);
SQLFreeConnect(c_hdbc2);

return;
}

//=====
// Function : CustomerBufInit
//=====
void CustomerBufInit()
{
    long i;
    for (i=0;i<customers_per_district;i++)
    {
        customer_buf[i].c_c_id = 0;
        customer_buf[i].c_d_id = 0;
        customer_buf[i].c_w_id = 0;

        strcpy(customer_buf[i].c_first,"");

        strcpy(customer_buf[i].c_middle,"");
        strcpy(customer_buf[i].c_last,"");

        strcpy(customer_buf[i].c_street_1,"");

        strcpy(customer_buf[i].c_street_2,"");
        strcpy(customer_buf[i].c_city,"");
        strcpy(customer_buf[i].c_state,"");
        strcpy(customer_buf[i].c_zip,"");
        strcpy(customer_buf[i].c_phone,"");

        strcpy(customer_buf[i].c_credit,"");

```

```

customer_buf[i].c_credit_lim = 0;
customer_buf[i].c_discount =

(float) 0;

strcpy(customer_buf[i].c_balance,"");

customer_buf[i].c_ytd_payment = 0;
customer_buf[i].c_payment_cnt = 0;
customer_buf[i].c_delivery_cnt = 0;

strcpy(customer_buf[i].c_data,"");

customer_buf[i].h_amount = 0;

strcpy(customer_buf[i].h_data,"");
}

}

//=====
// Function : CustomerBufLoad
// Fills shared buffer for HISTORY and CUSTOMER
//=====
void CustomerBufLoad(int d_id, long w_id)
{
    long i;
    CUSTOMER_SORT_STRUCT c(CUSTOMERS_PER_DISTRICT);

    for (i=0;i<customers_per_district;i++)
    {
        if (i < 1000)
            LastName(i, c[i].c_last);
        else
            LastName(i, c[i].c_last);

        LastName(NURand(255,0,999,LOADER_NURAND_C),
c[i].c_last);

        MakeAlphaStringPadded(8,16,FIRST_NAME_LEN,
c[i].c_first);

        c[i].c_id = i+1;

        printf("...Loading customer buffer for: d_id
= %d, w_id = %d\\n",
d_id, w_id);

        for (i=0;i<customers_per_district;i++)
        {
            customer_buf[i].c_d_id = d_id;
            customer_buf[i].c_w_id = w_id;
            customer_buf[i].h_amount = 10.0;
            customer_buf[i].c_ytd_payment =

10.0;
            customer_buf[i].c_payment_cnt = 1;
            customer_buf[i].c_delivery_cnt = 0;
            customer_buf[i].c_id = c[i].c_id;
            strcpy(customer_buf[i].c_first,

c[i].c_first);
            strcpy(customer_buf[i].c_last,

c[i].c_last);
            customer_buf[i].c_middle[0] = 'O';
            customer_buf[i].c_middle[1] = 'E';

            MakeAddress(customer_buf[i].c_street_1,

```

```

customer_buf[i].c_street_2,

customer_buf[i].c_city,

customer_buf[i].c_state,

customer_buf[i].c_zip);
        MakeNumberString(16, 16, PHONE_LEN,
customer_buf[i].c_phone);

        if (RandomNumber(1L, 100L) > 10)

            customer_buf[i].c_credit[0] = 'G';
            else

            customer_buf[i].c_credit[0] = 'B';
            customer_buf[i].c_credit[1] = 'C';
            customer_buf[i].c_credit_lim =

50000.0;
            customer_buf[i].c_discount =

((float) RandomNumber(0L, 5000L)) / 10000.0;

            strcpy(customer_buf[i].c_balance,"-
10.0");
            MakeAlphaStringPadded(300, 500,
C_DATA_LEN, customer_buf[i].c_data);

            // Generate HISTORY data
            MakeAlphaStringPadded(12, 24,
H_DATA_LEN, customer_buf[i].h_data);
        }

}

//=====
// Function : LoadCustomerTable
//=====
void LoadCustomerTable(LOADER_TIME_STRUCT
*customer_time_start)
{
    long i;
    long c_id;
    short c_d_id;
    long c_w_id;
    char c_first[FIRST_NAME_LEN+1];
    char c_middle[MIDDLE_NAME_LEN+1];
    char c_last[LAST_NAME_LEN+1];
    char c_street_1[ADDRESS_LEN+1];
    char c_street_2[ADDRESS_LEN+1];
    char c_city[ADDRESS_LEN+1];
    char c_state[STATE_LEN+1];
    char c_zip[ZIP_LEN+1];
    char c_phone[PHONE_LEN+1];
    char c_credit[CREDIT_LEN+1];
    double c_credit_lim;
    double c_discount;
    char c_balance[6];
    double c_ytd_payment;
    short c_payment_cnt;
    short c_delivery_cnt;
    char c_data[C_DATA_LEN+1];
    char c_since[C_SINCE_LEN+1];

    RETCODE rc;

    i = 0;
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);

```

```

        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0,
LAST_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0,
FIRST_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0,
CREDIT_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5,
NULL, 0, SQLCHARACTER, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN,
NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0,
PHONE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0,
C_SINCE_LEN, NULL, 0, SQLCHARACTER, ++i);

```

```

        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0,
MIDDLE_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0,
C_DATA_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);

        for (i = 0; i < customers_per_district; i++)
        {
            c_id = customer_buf[i].c_id;
            c_d_id = customer_buf[i].c_d_id;
            c_w_id = customer_buf[i].c_w_id;

            strcpy(c_first,
customer_buf[i].c_first);
            strcpy(c_middle,
customer_buf[i].c_middle);
            strcpy(c_last,
customer_buf[i].c_last);
            strcpy(c_street_1,
customer_buf[i].c_street_1);
            strcpy(c_street_2,
customer_buf[i].c_street_2);
            strcpy(c_city,
customer_buf[i].c_city);
            strcpy(c_state,
customer_buf[i].c_state);
            strcpy(c_zip,
customer_buf[i].c_zip);
            strcpy(c_phone,
customer_buf[i].c_phone);
            strcpy(c_credit,
customer_buf[i].c_credit);

            FormatDate(&c_since);

            c_credit_lim =
customer_buf[i].c_credit_lim;
            c_discount =
customer_buf[i].c_discount;
            strcpy(c_balance,
customer_buf[i].c_balance);
            c_ytd_payment =
customer_buf[i].c_ytd_payment;
            c_payment_cnt =
customer_buf[i].c_payment_cnt;
            c_delivery_cnt =
customer_buf[i].c_delivery_cnt;
            strcpy(c_data,
customer_buf[i].c_data);

            // Send data to server
            rc = bcp_sendrow(c_hdbc1);
            if (rc != SUCCEEDED)
                HandleErrorDBC(c_hdbc1);

            customer_rows_loaded++;
            CheckForCommit(c_hdbc1, c_hstmt1,
customer_rows_loaded, "customer", &customer_time_start-
>time_start);
        }
    }

//=====
//=====
//

```

```

// Function : LoadHistoryTable
//
//=====
void LoadHistoryTable(LOADER_TIME_STRUCT
*history_time_start)
{
    long c_id;
    short c_d_id;
    long c_w_id;
    double h_amount;
    char h_data[H_DATA_LEN+1];
    char h_date[H_DATE_LEN+1];

    RETCODE rc;

    i = 0;
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_data, 0,
H_DATA_LEN, NULL, 0, SQLCHARACTER, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0,
H_DATA_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);

    for (i = 0; i < customers_per_district; i++)
    {
        c_id = customer_buf[i].c_id;
        c_d_id = customer_buf[i].c_d_id;
        c_w_id = customer_buf[i].c_w_id;
        h_amount =
customer_buf[i].h_amount;
        strcpy(h_data,
customer_buf[i].h_data);

        FormatDate(&h_date);

        // send to server
        rc = bcp_sendrow(c_hdbc2);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc2);
    }
}

```

```

        history_rows_loaded++;
        CheckForCommit(c_hdbc2, c_hstmt2,
history_rows_loaded, "history", &history_time_start-
>time_start);
    }
}

//=====
//
// Function   : LoadOrders
//
//=====
void LoadOrders()
{
    LOADER_TIME_STRUCT    orders_time_start;
    LOADER_TIME_STRUCT    new_order_time_start;
    LOADER_TIME_STRUCT
order_line_time_start;
    long
    w_id;
    short                d_id;
    DWORD
dwThreadId[MAX_ORDER_THREADS];
    HANDLE
hThread[MAX_ORDER_THREADS];
    char                  name[20];
    RETCODE
rc;
    char
bcphint[128];
    char
err_log_path_ord[256];
    char
err_log_path_nord[256];
    char
err_log_path_ordl[256];

    // seed with unique number
    seed(6);

    printf("Loading orders...\n");

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        BuildIndex("idxordc1");
        BuildIndex("idxnodc1");
        BuildIndex("idxodlc1");
    }

    // initialize bulk copy
    sprintf(name, "%s..%s", aptr->database,
"orders");

    rc = bcp_init(o_hdbc1, name, NULL,
"logs\\orders.err", DB_IN);
    strcpy(err_log_path_ord,aptr->log_path);
    strcat(err_log_path_ord,"orders.err");
    rc = bcp_init(o_hdbc1, name, NULL,
err_log_path_ord, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        sprintf(bcphint, "tablock, order
(o_w_id, o_d_id, o_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
    }
}

```

```

    rc = bcp_control(o_hdbc1, BCPHINTS,
(void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    }

    sprintf(name, "%s..%s", aptr->database,
"new_order");

    rc = bcp_init(o_hdbc2, name, NULL,
"logs\\neword.err", DB_IN);
    strcpy(err_log_path_nord,aptr->log_path);
    strcat(err_log_path_nord,"neword.err");
    rc = bcp_init(o_hdbc2, name, NULL,
err_log_path_nord, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
    {
        sprintf(bcphint, "tablock, order
(no_w_id, no_d_id, no_o_id), ROWS_PER_BATCH = %u",
(aptr->num_warehouses * 9000));
    }
    rc = bcp_control(o_hdbc2, BCPHINTS,
(void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);
    }

    sprintf(name, "%s..%s", aptr->database,
"order_line");

    rc = bcp_init(o_hdbc3, name, NULL,
"logs\\ordline.err", DB_IN);
    strcpy(err_log_path_ordl,aptr->log_path);
    strcat(err_log_path_ordl,"ordline.err");
    rc = bcp_init(o_hdbc3, name, NULL,
err_log_path_ordl, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    if ((aptr->build_index == 1) && (aptr->index_order
== 1))
    {
        sprintf(bcphint, "tablock, order
(ol_w_id, ol_d_id, ol_o_id, ol_number), ROWS_PER_BATCH
= %u", (aptr->num_warehouses * 300000));
    }
    rc = bcp_control(o_hdbc3, BCPHINTS,
(void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    }

    orders_rows_loaded = 0;
    new_order_rows_loaded = 0;
    order_line_rows_loaded = 0;

    OrdersBufInit();

    orders_time_start.time_start = (TimeNow() /
MILLI);
    new_order_time_start.time_start = (TimeNow() /
MILLI);
    order_line_time_start.time_start = (TimeNow() /
MILLI);

    for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
    {
        for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)

```

```

    {
        OrdersBufLoad(d_id,
w_id);

        // start parallel loading
        threads here...
        // start Orders table
        thread
        printf("...Loading Order
Table for: d_id = %d, w_id = %d\n", d_id, w_id);
        hThread[0] =
        CreateThread(NULL,
            0,
            (LPTHREAD_START_ROUTINE) LoadOrdersTable,
            &orders_time_start,
            0,
            &dwThreadId[0]);

        if (hThread[0] == NULL)
        {
            printf("Error,
failed in creating creating thread = 0.\n");
            exit(-1);
        }

        // start NewOrder table
        thread
        printf("...Loading New-
Order Table for: d_id = %d, w_id = %d\n", d_id, w_id);
        hThread[1] =
        CreateThread(NULL,
            0,
            (LPTHREAD_START_ROUTINE) LoadNewOrderTable,
            &new_order_time_start,
            0,
            &dwThreadId[1]);

        if (hThread[1] == NULL)
        {
            printf("Error,
failed in creating creating thread = 1.\n");
            exit(-1);
        }

        // start Order-Line table
        thread
        printf("...Loading Order-
Line Table for: d_id = %d, w_id = %d\n", d_id, w_id);
        hThread[2] =
        CreateThread(NULL,
            0,

```

```

(LPTHREAD_START_ROUTINE) LoadOrderLineTable,
&order_line_time_start,
                                0,
&dwThreadId[2]);
                                if (hThread[2] == NULL)
                                {
                                    printf("Error,
failed in creating creating thread = 2.\n");
                                    exit(-1);
                                }
                                WaitForSingleObject(
hThread[0], INFINITE );
                                WaitForSingleObject(
hThread[1], INFINITE );
                                WaitForSingleObject(
hThread[2], INFINITE );
                                if
                                {
                                    printf("Error,
failed in closing Orders thread handle with errno:
%d\n", GetLastError());
                                }
                                if
                                {
                                    printf("Error,
failed in closing NewOrder thread handle with errno:
%d\n", GetLastError());
                                }
                                if
                                {
                                    printf("Error,
failed in closing OrderLine thread handle with errno:
%d\n", GetLastError());
                                }
                                }
                                printf("Finished loading orders.\n");
                                return;
//=====
//
// Function : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=====
void OrdersBufInit()
{
    int i;
    int j;

```

```

for (i=0;i<orders_per_district; i++)
{
    orders_buf[i].o_id = 0;
    orders_buf[i].o_d_id = 0;
    orders_buf[i].o_w_id = 0;
    orders_buf[i].o_c_id = 0;
    orders_buf[i].o_carrier_id = 0;
    orders_buf[i].o_ol_cnt = 0;
    orders_buf[i].o_all_local = 0;
    for (j=0;j<=14;j++)
    {
        orders_buf[i].o_ol[j].ol
= 0;
        orders_buf[i].o_ol[j].ol_i_id = 0;
        orders_buf[i].o_ol[j].ol_supply_w_id = 0;
        orders_buf[i].o_ol[j].ol_quantity = 0;
        orders_buf[i].o_ol[j].ol_amount = 0;
        strcpy(orders_buf[i].o_ol[j].ol_dist_info, "")
    }
}
//=====
//
// Function : OrdersBufLoad
//
// Fills shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=====
void OrdersBufLoad(short d_id, long w_id)
{
    int cust[ORDERS_PER_DISTRICT+1];
    long o_id;
    long ol;
    printf("...Loading Order Buffer for: d_id =
%d, w_id = %d\n",
        d_id, w_id);
    GetPermutation(cust, orders_per_district);
    for (o_id=0;o_id<orders_per_district;o_id++)
    {
        // Generate ORDER and NEW-ORDER
        data
        orders_buf[o_id].o_d_id = d_id;
        orders_buf[o_id].o_w_id = w_id;
        orders_buf[o_id].o_id = o_id+1;
        orders_buf[o_id].o_c_id =
        cust[o_id+1];
        orders_buf[o_id].o_ol_cnt =
(short)RandomNumber(5L, 15L);
        if (o_id < first_new_order)
        {
            orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);
            orders_buf[o_id].o_all_local = 1;
        }
    }
}

```

```

else
{
    orders_buf[o_id].o_carrier_id = 0;
    orders_buf[o_id].o_all_local = 1;
}
for (ol=0;
ol<orders_buf[o_id].o_ol_cnt; ol++)
{
    orders_buf[o_id].o_ol[ol].ol = ol+1;
    orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);
    orders_buf[o_id].o_ol[ol].ol_supply_w_id =
w_id;
    orders_buf[o_id].o_ol[ol].ol_quantity = 5;
    MakeAlphaString(24, 24,
OL_DIST_INFO_LEN,
&orders_buf[o_id].o_ol[ol].ol_dist_info);
    data // Generate ORDER-LINE
    first_new_order) if (o_id <
{
        orders_buf[o_id].o_ol[ol].ol_amount = 0;
        // Added to
insure ol_delivery_d set properly during load
        FormatDate(&orders_buf[o_id].o_ol[ol].ol_deli
very_d);
    }
    else
    {
        orders_buf[o_id].o_ol[ol].ol_amount =
RandomNumber(1,999999)/100.0;
        // Added to
insure ol_delivery_d set properly during load
        // odbc
        datetime format
        strcpy(orders_buf[o_id].o_ol[ol].ol_delivery_
d, "1899-12-31 00:00:00.000");
    }
}
//=====
//
// Function : LoadOrdersTable
//
//=====
void LoadOrdersTable(LOADER_TIME_STRUCT
*orders_time_start)
{
    int i;
    long o_id;
    short o_d_id;
    long o_w_id;

```

```

long      o_c_id;
short     o_carrier_id;
short     o_ol_cnt;
short     o_all_local;

char
o_entry_d[o_ENTRY_D_LEN+1];
RETCODE   rc;
DBINT     rcint;

// bind ORDER data
i = 0;
rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);
rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);

for (i = 0; i < orders_per_district; i++)
{
    o_id      = orders_buf[i].o_id;
    o_d_id    =
orders_buf[i].o_d_id;
    o_w_id    =
orders_buf[i].o_w_id;
    o_c_id    =
orders_buf[i].o_c_id;
    o_carrier_id =
orders_buf[i].o_carrier_id;
    o_ol_cnt  =
orders_buf[i].o_ol_cnt;
    o_all_local =
orders_buf[i].o_all_local;

    FormatDate(&o_entry_d);

    // send data to server
    rc = bcp_sendrow(o_hdbc1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    orders_rows_loaded++;
}

```

```

CheckForCommit(o_hdbc1, o_hstmt1,
orders_rows_loaded, "orders", &orders_time_start-
>time_start);
}
}
if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
{
    rcint = bcp_done(o_hdbc1);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc1);

    SQLFreeStmt(o_hstmt1, SQL_DROP);
    SQLDisconnect(o_hdbc1);
    SQLFreeConnect(o_hdbc1);

    // if build index after load...
    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
        BuildIndex("idxordc1");

    // build non-clustered index
    if (aptr->build_index == 1)
        BuildIndex("idxordnc");
}
}
}
}
//=====
//
// Function : LoadNewOrderTable
//
//=====
void LoadNewOrderTable(LOADER_TIME_STRUCT
*new_order_time_start)
{
    long      long      o_id;          i;
    short     short     o_d_id;
    long      long      o_w_id;
    RETCODE   RETCODE   rc;
    DBINT     DBINT     rcint;

    // Bind NEW-ORDER data
    i = 0;
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    for (i = first_new_order; i < last_new_order;
i++)
    {
        o_id      = orders_buf[i].o_id;
        o_d_id    = orders_buf[i].o_d_id;
        o_w_id    = orders_buf[i].o_w_id;

        rc = bcp_sendrow(o_hdbc2);
        if (rc != SUCCEED)

```

```

HandleErrorDBC(o_hdbc2);

    new_order_rows_loaded++;

    CheckForCommit_Big(o_hdbc2,
o_hstmt2, new_order_rows_loaded, "new_order",
&new_order_time_start->time_start);
}
}
if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
{
    rcint = bcp_done(o_hdbc2);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc2);

    SQLFreeStmt(o_hstmt2, SQL_DROP);
    SQLDisconnect(o_hdbc2);
    SQLFreeConnect(o_hdbc2);

    // if build index after load...
    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
        BuildIndex("idxnodc1");
}
}
}
}
//=====
//
// Function : LoadOrderLineTable
//
//=====
void LoadOrderLineTable(LOADER_TIME_STRUCT
*order_line_time_start)
{
    long      long      o_id;          i;
    long      long      j;
    long      long      o_d_id;
    short     short     o_d_id;
    long      long      o_w_id;
    double    double    ol;
    long      long      ol_i_id;
    long      long      ol_supply_w_id;
    short     short     ol_quantity;
    double    double    ol_amount;
    char      char      ol_dist_info[DIST_INFO_LEN+1];
    char      char      ol_delivery_d[OL_DELIVERY_D_LEN+1];
    RETCODE   RETCODE   rc;
    DBINT     DBINT     rcint;

    // bind ORDER-LINE data
    i = 0;
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);

```

```

        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_delivery_d, 0, OL_DELIVERY_D_LEN, NULL, 0,
SQLCHARACTER, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_supply_w_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4,
++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);
        rc = bcp_bind(o_hdbc3, (BYTE *) &ol_dist_info, 0,
DIST_INFO_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc3);

        for (i = 0; i < orders_per_district; i++)
        {
            o_id = orders_buf[i].o_id;
            o_d_id = orders_buf[i].o_d_id;
            o_w_id = orders_buf[i].o_w_id;

            for (j=0; j <
orders_buf[i].o_ol_cnt; j++)
            {
orders_buf[i].o_ol[j].ol =
orders_buf[i].o_ol[j].ol_i_id =
orders_buf[i].o_ol[j].ol_supply_w_id =
orders_buf[i].o_ol[j].ol_quantity =
orders_buf[i].o_ol[j].ol_amount =
orders_buf[i].o_ol[j].ol_amount;

                strcpy(ol_delivery_d, orders_buf[i].o_ol[j].ol_
_delivery_d);

                strcpy(ol_dist_info, orders_buf[i].o_ol[j].ol_
dist_info);

                rc =
bcp_sendrow(o_hdbc3);
                if (rc != SUCCEED)

                    HandleErrorDBC(o_hdbc3);

                    order_line_rows_loaded++;

                    CheckForCommit_Big(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line",
&order_line_time_start->time_start);
            }
        }

```

```

        if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
        {
            rcint = bcp_done(o_hdbc3);
            if (rcint < 0)
                HandleErrorDBC(o_hdbc3);

            SQLFreeStmt(o_hstmt3, SQL_DROP);
            SQLDisconnect(o_hdbc3);
            SQLFreeConnect(o_hdbc3);

            // if build index after load...
            if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                BuildIndex("idxodlcl1");
        }
    }
}
//=====
//
// Function : GetPermutation
//
//=====
void GetPermutation(int perm[], int n)
{
    int i, r, t;
    for (i=1; i<=n; i++)
        perm[i] = i;

    for (i=1; i<=n; i++)
    {
        r = RandomNumber(i,n);
        t = perm[i];
        perm[i] = perm[r];
        perm[r] = t;
    }
}
//=====
//
// Function : CheckForCommit
//
//=====
void CheckForCommit(HDBC hdbc,
HSTMT
hstmt,
long
rows_loaded,
char
*table_name,
long
*time_start)
{
    long time_end, time_diff;
    if ( !(rows_loaded % aptr->batch) )
    {
        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("-> Loaded %ld rows into %s
in %ld sec - Total = %d (%.2f rps)\n",
aptr->batch,
table_name,
rows_loaded,
(float) aptr-
>batch / (time_diff ? time_diff : 1L));

        *time_start = time_end;
    }
}
return;
//=====
//
// Function : OpenConnections
//
//=====
void OpenConnections()
{
    RETCODE rc;
    char
szDriverString[300];
    char
szDriverStringOut[1024];
    SQLSMALLINT
cbDriverStringOut;

```

```

        table_name,
        time_diff,
        rows_loaded,
        (float) aptr-
>batch / (time_diff ? time_diff : 1L));
        *time_start = time_end;
    }
}
return;
//=====
//
// Function : CheckForCommit_Big
//
//=====
void CheckForCommit_Big(HDBC hdbc,
HSTMT
hstmt,
double rows_loaded,
char
*time_start)
{
    long time_end, time_diff;
    if ( !(fmod(rows_loaded, aptr->batch) ) )
    {
        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("-> Loaded %ld rows into %s
in %ld sec - Total = %.0f (%.2f rps)\n",
aptr->batch,
table_name,
time_diff,
rows_loaded,
(float) aptr-
>batch / (time_diff ? time_diff : 1L));

        *time_start = time_end;
    }
}
return;
//=====
//
// Function : OpenConnections
//
//=====
void OpenConnections()
{
    RETCODE rc;
    char
szDriverString[300];
    char
szDriverStringOut[1024];
    SQLSMALLINT
cbDriverStringOut;

```

```

        SQLAllocHandle(SQL_HANDLE_ENV,
SQL_NULL_HANDLE, &henv );

        SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION,
(void*)SQL_OV_ODBC3, 0 );

        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&i_hdbc1);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&w_hdbc1);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&c_hdbc1);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&c_hdbc2);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&o_hdbc1);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&o_hdbc2);
        SQLAllocHandle(SQL_HANDLE_DBC, henv,
&o_hdbc3);

        SQLSetConnectAttr(i_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(w_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(c_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(c_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc3, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );

        // Open connections to SQL Server
        // Connection 1
        sprintf( szDriverString, "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

        rc = SQLSetConnectOption (i_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
        if (rc != SUCCEED)
            HandleErrorDBC(i_hdbc1);

        rc = SQLDriverConnect ( i_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0],
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
        if ( (rc != SUCCEED) &&
(rc != SQL_SUCCESS_WITH_INFO) )
        {
            HandleErrorDBC(i_hdbc1);
            printf("TPC-C Loader aborted!\n");
            exit(9);
        }
    }
}

```

```

        HandleErrorDBC(i_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 2
    sprintf( szDriverString, "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

    rc = SQLSetConnectOption (w_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = SQLDriverConnect ( w_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0],
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
    if ( (rc != SUCCEED) &&
(rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(w_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 3
    sprintf( szDriverString, "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

    rc = SQLSetConnectOption (c_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = SQLDriverConnect ( c_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0],
SQL_NTS,

```

```

        (SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
    if ( (rc != SUCCEED) &&
(rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(c_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 4
    sprintf( szDriverString, "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

    rc = SQLSetConnectOption (c_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    rc = SQLDriverConnect ( c_hdbc2,
NULL,
(SQLCHAR*)&szDriverString[0],
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
    if ( (rc != SUCCEED) &&
(rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(c_hdbc2);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 5
    sprintf( szDriverString, "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

    rc = SQLSetConnectOption (o_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

```



```

rc = SQLDriverConnect ( o_hdbc1,
    NULL,
    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,
    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc1);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

// Connection 6
sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
    aptr->server,
    aptr->user,
    aptr->password,
    aptr->database );

rc = SQLSetConnectOption (o_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc2);

rc = SQLDriverConnect ( o_hdbc2,
    NULL,
    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,
    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc2);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

// Connection 7
sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
    aptr->server,
    aptr->user,

```

```

    aptr->password,
    aptr->database );

rc = SQLSetConnectOption (o_hdbc3,
SQL_PACKET_SIZE, aptr->pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);

rc = SQLDriverConnect ( o_hdbc3,
    NULL,
    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,
    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc3);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

//=====
//
// Function name: BuildIndex
//
//=====
void BuildIndex(char *index_script)
{
    char cmd[256];

    printf("Starting index creation:
%s\n",index_script);

    sprintf(cmd, "osql -S%s -U%s -P%s -e -
i%s\\%s.sql > %s%s.log",
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->
>index_script_path,
        index_script,
        aptr->log_path,
        index_script);

    system(cmd);

    printf("Finished index creation:
%s\n",index_script);
}

//=====
//
// Function name: HandleErrorDBC
//
//=====

```

```

void HandleErrorDBC (SQLHDBC hdbc1)
{
    SQLCHAR SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLLEN NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN rc2;
    char timebuf[128];
    char datebuf[128];
    char err_log_path[256];
    FILE *fp1;

    i = 1;
    while (( rc2 = SQLGetDiagRec(SQL_HANDLE_DBC ,
hdbc1, i, SqlState , &NativeError,
    Msg,
    sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
    {
        sprintf( szLastError , "%s" , Msg
    );

        _strtime(timebuf);
        _strdate(datebuf);

        printf( "[%s : %s] %s\n=>SQLState:
%s\n" , datebuf, timebuf, szLastError, SqlState);

        strcpy(err_log_path,aptr-
>log_path);
        strcat(err_log_path,"tpcldr.err");
        fp1 = fopen(err_log_path,"a+");
        if (fp1 == NULL)
            printf("ERROR: Unable to
open errorlog file.\n");
        else
        {
            fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
            fclose(fp1);
        }
        i++;
    }

//=====
//
// Function : HandleErrorSTMT
//
//=====
void HandleErrorSTMT (HSTMT hstmt1)
{
    SQLCHAR SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLLEN NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN rc2;
    char timebuf[128];
    char datebuf[128];
    char err_log_path[256];
    FILE *fp1;

    i = 1;
    while (( rc2 = SQLGetDiagRec(SQL_HANDLE_STMT
, hstmt1, i, SqlState , &NativeError,
    Msg,
    sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
    {

```

```

MAX_SQL_ERRORS)    if (total_db_errors >=
                    {
                        printf(">>>> Maximum SQL
errors of %d exceeded. Terminating
TPCCLDR.<<<<<\n",total_db_errors);
                    exit(9);
                    }
                    total_db_errors++;

                    sprintf( szLastError , "%s" , Msg
);

                    _strtime(timebuf);
                    _strdate(datebuf);

                    printf( "[%s : %s] %s\nSQLState:
%s\n" , datebuf, timebuf, szLastError, SqlState);

                    strcpy(err_log_path,aptr-
>log_path);

                    strcat(err_log_path,"tpccldr.err");
                    fp1 = fopen(err_log_path,"a+");
                    if (fp1 == NULL)
                        printf("ERROR: Unable to
open errorlog file.\n");
                    else
                        {
                            fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                            fclose(fp1);
                        }

                    i++;
                }

}

//=====
//
// Function   : FormatDate
//
//=====
void FormatDate ( char* szTimeCOutput )
{
    struct tm when;
    time_t now;

    time( &now );
    when = *localtime( &now );

    mktime( &when );

    // odbc datetime format
    strftime( szTimeCOutput , 30 , "%Y-%m-%d
%H:%M:%S.000" , &when );

    return;
}

```

random.c

```
// File: RANDOM.C
```

```

// Microsoft TPC-C
Kit Ver. 4.62
// Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2005
// Purpose: Random number generation routines
for database loader

// Includes
#include "tpcc.h"
#include "math.h"

// Defines
#define A 16807
#define M 2147483647
#define Q 127773 /* M div A */
#define R 2836 /* M mod A */
#define Thread __declspec(thread)

// Globals
long Thread Seed = 0; /* thread local seed
*/

/*****
*****
* random -
*
* Implements a GOOD pseudo random number
generator. This generator
* will/should? run the complete period before
repeating.
*
* Copied from:
*
* Random Numbers Generators: Good Ones Are Hard
to Find.
* Communications of the ACM - October 1988 Volume
31 Number 10
*
* Machine Dependencies:
*
* long must be 2 ^ 31 - 1 or greater.
*
*
*****
*****/

/*****
*****
* seed - load the Seed value used in irand and drand.
Should be used before
* first call to irand or drand.
*
*****
*****/

void seed(long val)
{
    #ifdef DEBUG
        printf("[%ld]DBG: Entering seed()...\n", (int)
GetCurrentThreadId());
        printf("Old Seed %ld New Seed %ld\n",Seed,
val);
    #endif
}

```

```

if ( val < 0 )
    val = abs(val);

Seed = val;
}

/*****
*****
*
* irand - returns a 32 bit integer pseudo random number
with a period of
* 1 to 2 ^ 32 - 1.
*
*
* parameters:
*
* none.
*
*
* returns:
*
* 32 bit integer - defined as long ( see above ).
*
*
* side effects:
*
* seed get recomputed.
*****
*****/

long irand()
{
    register long s; /* copy of seed */
    register long test; /* test flag */
    register long hi; /* tmp value for speed */
    register long lo; /* tmp value for speed */

    #ifdef DEBUG
        printf("[%ld]DBG: Entering irand()...\n", (int)
GetCurrentThreadId());
    #endif

    s = Seed;
    hi = s / Q;
    lo = s % Q;

    test = A * lo - R * hi;
    if ( test > 0 )
        Seed = test;
    else
        Seed = test + M;

    return( Seed );
}

/*****
*****
*
* drand - returns a double pseudo random number between
0.0 and 1.0.
* See irand.
*
*****
*****/

```

```

*****
*****
double drand()
{
#ifdef DEBUG
    printf("[%ld]DBG: Entering drand()...\n", (int)
GetCurrentThreadId());
#endif
    return( (double)irand() / 2147483647.0);
}

//=====
// Function : RandomNumber
//
// Description:
//=====
long RandomNumber(long lower, long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif
    if ( upper == lower ) /* pgd 08-13-96
perf enhancement */
        return lower;
    upper++;
    if ( upper <= lower )
        rand_num = upper;
    else
        rand_num = lower + irand() % (upper
- lower); /* pgd 08-13-96 perf enhancement */

#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
(int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif

    return rand_num;
}

#if 0
//Original code pgd 08/13/96
long RandomNumber(long lower,
long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif
    upper++;
    if ((upper <= lower))

```

```

        else
            rand_num = upper;
        rand_num = lower + irand() %
((upper > lower) ? upper - lower : upper);
#endif
#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
(int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif
    return rand_num;
}
#endif
//=====
// Function : NURand
//
// Description:
//=====
long NURand(int iConst,
long x,
long y,
long C)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering NURand()...\n", (int)
GetCurrentThreadId());
#endif
    rand_num = (((RandomNumber(0,iConst) |
RandomNumber(x,y)) + C) % (y-x+1))+x;

#ifdef DEBUG
    printf("[%ld]DBG: NURand: num = %d\n", (int)
GetCurrentThreadId(), rand_num);
#endif
    return rand_num;
}

```

strings.c

```

// File: STRINGS.C
// Microsoft TPC-C
// Kit Ver. 4.51
// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2003
// Purpose: Source file for database loader
// string functions

// Includes
#include "tpcc.h"
#include <string.h>
#include <ctype.h>

```

```

//=====
//
// Function name: MakeAddress
//
//=====
void MakeAddress(char *street_1,
char
*street_2,
char *city,
char *state,
char *zip)
{
#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAddress()\n", (int)
GetCurrentThreadId());
#endif
    MakeAlphaString(10, 20, ADDRESS_LEN, street_1);
    MakeAlphaString(10, 20, ADDRESS_LEN, street_2);
    MakeAlphaString(10, 20, ADDRESS_LEN, city);
    MakeAlphaString(2, 2, STATE_LEN, state);
    MakeZipNumberString(9, 9, ZIP_LEN, zip);

#ifdef DEBUG
    printf("[%ld]DBG: MakeAddress: street_1: %s,
street_2: %s, city: %s, state: %s, zip: %s\n",
(int)
GetCurrentThreadId(), street_1, street_2, city, state,
zip);
#endif
    return;
}

//=====
//
// Function name: LastName
//
//=====
void LastName(int num,
char *name)
{
    static char *n[] =
{
        "BAR", "OUGHT", "ABLE", "PRI",
        "PRES",
        "ESE", "ANTI", "CALLY", "ATION",
        "EING"
    };

#ifdef DEBUG
    printf("[%ld]DBG: Entering LastName()\n", (int)
GetCurrentThreadId());
#endif
    if ((num >= 0) && (num < 1000))
    {
        strcpy(name, n[(num/100)%10]);
        strcat(name, n[(num/10)%10]);
        strcat(name, n[(num/1)%10]);
        if (strlen(name) < LAST_NAME_LEN)
        {

```

```

name);
        PaddString(LAST_NAME_LEN,
    }
}
else
{
    printf("\nError in LastName()...
num <%ld> out of range (0,999)\n", num);
    exit(-1);
}

#ifdef DEBUG
    printf("[%ld]DBG: LastName: num = [%d] ==>
[%d][%d][%d]\n",
        (int)
GetCurrentThreadId(), num, num/100, (num/10)%10,
num%10);
    printf("[%ld]DBG: LastName: String = %s\n",
(int) GetCurrentThreadId(), name);
#endif

    return;
}

//=====
//
// Function name: MakeAlphaString
//
//=====

//philipdu 08/13/96 Changed MakeAlphaString to use A-Z,
a-z, and 0-9 in
//accordance with spec see below:
//The spec says:
//4.3.2.2 The notation random a-string [x .. y]
//(respectively, n-string [x .. y]) represents a string
of random alphanumeric
//(respectively, numeric) characters of a random length
of minimum x, maximum y,
//and mean (y+x)/2. Alphanumerics are A..Z, a..z, and
0..9. The only other
//requirement is that the character set used "must be
able to represent a minimum
//of 128 different characters". We are using 8-bit
chars, so this is a non issue.
//It is completely unreasonable to stuff non-printing
chars into the text fields.
//--Clevine 08/13/96

int MakeAlphaString( int x, int y, int z, char *str)
{
    int len;
    int i;
    char cc = 'a';
    static char chArray[] =
"0123456789ABCDEFGHIJKLMNPOQRSTUVWXYZabcde fghijklmnopqr
stuvwxyz";
    static int chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAlphaString()\n",
(int) GetCurrentThreadId());
#endif

    len= RandomNumber(x, y);

    for (i=0; i<len; i++)
        str[i] =
chArray[RandomNumber(0, chArrayMax)];
    str[len] = 0;

    return len;
}

int MakeAlphaStringPadded( int minLen, int maxLen,
int padLen, char *str)
{
    int len;
    int i;
    char cc = 'a';
    static char chArray[] =
"0123456789ABCDEFGHIJKLMNPOQRSTUVWXYZabcde fghijklmnopqr
stuvwxyz";
    static int chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeAlphaStringPadded()\n", (int)
GetCurrentThreadId());
#endif

    len= RandomNumber(minLen, maxLen);

    for (i=0; i<len; i++)
        str[i] =
chArray[RandomNumber(0, chArrayMax)];
    if (len < padLen)
        memset(str+len, ' ', padLen - len);
    str[padLen] = 0;

    return padLen;
}

//=====
//
// Function name: MakeOriginalAlphaString
//
//=====

int MakeOriginalAlphaString(int x,
int y,
int z,
char *str,
int percent)
{
    int len;
    int val;
    int start;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeOriginalAlphaString()\n", (int)
GetCurrentThreadId());
#endif

    // verify percentage is valid
    if ((percent < 0) || (percent > 100))
    {
        printf("MakeOriginalAlphaString:
Invalid percentage: %d\n", percent);
        exit(-1);
    }
}

```

```

}
// verify string is at least 8 chars in length
if (x < 8)
{
    printf("MakeOriginalAlphaString:
string length must be >= 8\n");
    exit(-1);
}

// Make Alpha String
len = MakeAlphaString(x,y, z, str);
val = RandomNumber(1,100);
if (val <= percent)
{
    start = RandomNumber(0, len - 8);
    strncpy(str + start, "ORIGINAL",
8);
}

#ifdef DEBUG
    printf("[%ld]DBG: MakeOriginalAlphaString: : %s\n",
(int)
GetCurrentThreadId(), str);
#endif

    return len;
}

//=====
//
// Function name: MakeNumberString
//
//=====

int MakeNumberString(int x, int y, int z, char *str)
{
    char tmp[16];

    //MakeNumberString is always called
MakeZipNumberString(16, 16, 16, string)

    memset(str, '0', 16);
    itoa(RandomNumber(0, 99999999), tmp, 10);
    memcpy(str, tmp, strlen(tmp));

    itoa(RandomNumber(0, 99999999), tmp, 10);
    memcpy(str+8, tmp, strlen(tmp));

    str[16] = 0;

    return 16;
}

//=====
//
// Function name: MakeZipNumberString
//
//=====

int MakeZipNumberString(int x, int y, int z, char
*str)
{
    char tmp[16];
}

```

```

//MakeZipNumberString is always called
MakeZipNumberString(9, 9, 9, string)

strcpy(str, "000011111");

itoa(RandomNumber(0, 9999), tmp, 10);
memcpy(str, tmp, strlen(tmp));

return 9;
}

//=====
//
// Function name: InitString
//
//=====
void InitString(char *str, int len)
{
#ifdef DEBUG
printf("[%ld]DBG: Entering InitString()\n", (int)
GetCurrentThreadId());
#endif

memset(str, ' ', len);
str[len] = 0;
}

//=====
//
// Function name: InitAddress
//
// Description:
//
//=====
void InitAddress(char *street_1, char *street_2, char
*city, char *state, char *zip)
{
memset(street_1, ' ', ADDRESS_LEN+1);
memset(street_2, ' ', ADDRESS_LEN+1);
memset(city, ' ', ADDRESS_LEN+1);

street_1[ADDRESS_LEN+1] = 0;
street_2[ADDRESS_LEN+1] = 0;
city[ADDRESS_LEN+1] = 0;

memset(state, ' ', STATE_LEN+1);
state[STATE_LEN+1] = 0;

memset(zip, ' ', ZIP_LEN+1);
zip[ZIP_LEN+1] = 0;
}

//=====
//
// Function name: PaddString
//
//=====
void PaddString(int max, char *name)
{
int len;

len = strlen(name);

```

```

if ( len < max )
memset(name+len, ' ', max - len);
name[max] = 0;

return;
}

```

time.c

```

// File: TIME.C Microsoft TPC-C
// Kit Ver. 4.62
// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2005
// Purpose: Source file for time functions

// Includes
#include "tpcc.h"

// Globals
static long start_sec;

//=====
//
// Function name: TimeNow
//
//=====
long TimeNow()
{
long time_now;
struct _timeb el_time;

#ifdef DEBUG
printf("[%ld]DBG: Entering TimeNow()\n", (int)
GetCurrentThreadId());
#endif

ftime(&el_time);

time_now = ((el_time.time - start_sec) * 1000) +
el_time.millitm;

return time_now;
}

```

Appendix C: Tunable Parameters

Microsoft SQL Server 2005 Startup Parameters

Microsoft SQL Server was started with the following command-line options:

```
"C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Binn\sqlservr.exe" -e"C:\Program
Files\Microsoft SQL Server\MSSQL.1\MSSQL\LOG\errorlog"
-c -x -g150 -t661 -t677 -t697 -t827 -t834 -t836 -t1229
-t8011 -t8012 -t8018 -t8019 -t8020 -t8193 -t8710 -t8744
-t3502
```

Boot.ini

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows
Server 2003, Enterprise" /fastdetect /NoExecute=OptOut
```

Microsoft Windows Server 2003 EE Configuration (Enabled Services)

These Windows services are started:

- Application Experience Lookup Service
- COM+ Event System
- DCOM Server Process Launcher
- Event Log
- Logical Disk Manager
- Network Connections
- Network Location Awareness (NLA)
- Plug and Play
- Remote Procedure Call (RPC)
- Remote Procedure Call (RPC) Locator
- Security Accounts Manager
- Shell Hardware Detection
- TCP/IP NetBIOS Helper
- Windows Management Instrumentation
- Workstation

Microsoft SQL Server 2005 Configuration Parameters

name	config_value	run_value	minimum	maximum
Ad Hoc Distributed Queries	0	0	1	0
affinity I/O mask	-2147483648	0	2147483647	
affinity mask	-2147483648	15	2147483647	
Agent XPs	0	1	0	0
allow updates	0	1	0	0
awe enabled	0	1	1	1
blocked process threshold	0	0	86400	0
c2 audit mode	0	1	0	0
clr enabled	0	1	0	0
cost threshold for parallelism	0	5	0	32767
cross db ownership chaining	0	0	1	0
cursor threshold	-1	-1	2147483647	-1
Database Mail XPs	0	0	1	0
default full-text language	1033	1033	2147483647	
default language	0	9999	0	0
default trace enabled	0	0	1	0
disallow results from triggers	0	0	0	1
fill factor (%)	0	100	0	0
ft crawl bandwidth (max)	100	0	32767	100
ft crawl bandwidth (min)	0	0	32767	0
ft notify bandwidth (max)	100	0	32767	100
ft notify bandwidth (min)	0	0	32767	0
in-doubt xact resolution	0	0	2	0
index create memory (KB)	0	704	2147483647	
lightweight pooling	0	1	1	1
locks	5000	2147483647	0	0
max degree of parallelism	0	64	64	1
max full-text crawl range	4	0	256	4
max server memory (MB)	32256	32256	2147483647	
max text repl size (B)	65536	65536	2147483647	
max worker threads	128	32767	450	450
media retention	0	0	365	0
min memory per query (KB)	1024	512	2147483647	
min server memory (MB)	31200	31200	2147483647	
nested triggers	0	1	1	1
network packet size (B)	4096	512	32767	4096
Ole Automation Procedures	0	0	1	0

open objects	0	2147483647	0	
PH timeout (s)	1	3600	60	60
precompute rank	0	1	0	0
priority boost	0	1	1	1
query governor cost limit	0	0	2147483647	
query wait (s)	-1	-1	2147483647	-1
recovery interval (min)	0	32767	32767	
remote access	0	1	1	1
remote admin connections	0	0	1	0
remote login timeout (s)	0	0	2147483647	
remote proc trans	0	1	0	0
remote query timeout (s)	0	0	2147483647	
Replication XPs	0	1	0	0
scan for startup procs	0	0	1	0
server trigger recursion	0	1	1	1
set working set size	0	0	1	0
show advanced options	0	1	1	1
SMO and DMO XPs	0	1	1	1
SQL Mail XPs	0	1	0	0
transform noise words	0	0	1	0
two digit year cutoff	1753	9999	2049	
user connections	0	32767	0	0
user options	0	32767	0	0
Web Assistant Procedures	0	0	1	0
xp_cmdshell	0	1	0	0

Disk Controller Driver Registry Parameters

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x]
"ErrorControl"=dword:00000001
"Group"="SCSI miniport"
"Start"=dword:00000000
"Tag"=dword:0000002b
"Type"=dword:00000001
"ImagePath"=hex(2):73,00,79,00,73,00,74,00,65,00,6d,00,
33,00,32,00,5c,00,44,00,\
52,00,49,00,56,00,45,00,52,00,53,00,5c,00,6d,00,72,00,6
1,00,69,00,64,00,33,\
00,35,00,78,00,2e,00,73,00,79,00,73,00,00,00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Parameters]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Parameters\Device]
"NumberOfRequests"=dword:000000bd
"CreateInitiatorLU"=dword:00000001
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Parameters\PnpInterface]
"5"=dword:00000001
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Enum]
"0"="PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&5
b3bb31&0&700008"
"Count"=dword:00000007
"NextInstance"=dword:00000007
"1"="PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&1
376317a&0&700010"
"2"="PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&1
058b1a0&0&700020"
"3"="PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&3
359270c&0&700028"
"4"="PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\6&3
9d01c69&0&00100030"
"5"="PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\6&3
48b5ea3&0&00300238"
"6"="PCI\VEN_1000&DEV_0407&SUBSYS_05321000&REV_02\6&2
d8a86b5&0&00380238"
```

```
Page File Space 2,00 GB
Page File C:\pagefile.sys
```

[Hardware Resources]

[Conflicts/Sharing]

```
Resource Device PCI bus
I/O Port 0x00000000-0x000000CF7 Direct memory
I/O Port 0x00000000-0x000000CF7 access controller
Memory Address 0x64600000-0x646FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64600000-0x646FFFFF MegaRAID SCSI
320-4X RAID Controller
Memory Address 0x64900000-0x649FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64900000-0x649FFFFF MegaRAID SCSI
320-4X RAID Controller
Memory Address 0x64A00000-0x64AFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64A00000-0x64AFFFFF LSI Logic PCI-X
Ultra320 SCSI Host Adapter
Memory Address 0x64800000-0x64BFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x64BFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x64BFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x64BFFFFF MegaRAID SCSI
320-2X RAID Controller
Memory Address 0x5C200000-0x5E2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5C200000-0x5E2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5C200000-0x5E2FFFFF MegaRAID SCSI
320-2E RAID Controller
Memory Address 0x69100000-0x6A1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x69100000-0x6A1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x69100000-0x6A1FFFFF MegaRAID SCSI
320-2E RAID Controller
Memory Address 0xFFC00000-0xFFDFFFFF PCI bus
Memory Address 0xFFC00000-0xFFDFFFFF Intel(R) 82802
Firmware Hub Device
Memory Address 0x68000000-0x690FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x68000000-0x690FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x68000000-0x690FFFFF MegaRAID SCSI
320-2E RAID Controller
I/O Port 0x00003000-0x00003FFF PCI standard
PCI-to-PCI bridge
I/O Port 0x00003000-0x00003FFF PCI standard
PCI-to-PCI bridge
I/O Port 0x00003000-0x00003FFF LSI Logic PCI-X
Ultra320 SCSI Host Adapter
Memory Address 0x60400000-0x644FFFFF PCI standard
PCI-to-PCI bridge
```

```
Memory Address 0x60400000-0x644FFFFF Intel(R)
6700PXH PCI Express-to-PCI Bridge A - 0329
Memory Address 0x60400000-0x644FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x60400000-0x644FFFFF MegaRAID SCSI
320-4X RAID Controller
```

```
Memory Address 0x64C00000-0x66EFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64C00000-0x66EFFFFF Intel(R)
6700PXH PCI Express-to-PCI Bridge B - 032A
Memory Address 0x64C00000-0x66EFFFFF Broadcom
NetXtreme Gigabit Ethernet
```

```
IRQ 9 Microsoft ACPI-Compliant System
IRQ 9 Intel(R) 82801EB SMBus Controller - 24D3
```

```
Memory Address 0x6A200000-0x6B2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x6A200000-0x6B2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x6A200000-0x6B2FFFFF MegaRAID SCSI
320-2E RAID Controller
```

```
IRQ 16 Standard Universal PCI to USB Host Controller
```

```
IRQ 16 RADEON 7000 RADEON VE Family (Microsoft
Corporation)
```

```
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 Standard Universal PCI to USB Host Controller
```

```
Memory Address 0x50000000-0xFDFFFFFFFF PCI bus
Memory Address 0x50000000-0xFDFFFFFFFF RADEON 7000
RADEON VE Family (Microsoft Corporation)
```

```
Memory Address 0x5E300000-0x603FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5E300000-0x603FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5E300000-0x603FFFFF MegaRAID SCSI
320-2E RAID Controller
```

```
Memory Address 0xA0000-0xBFFFFF PCI bus
Memory Address 0xA0000-0xBFFFFF RADEON 7000
RADEON VE Family (Microsoft Corporation)
```

```
Memory Address 0x64D00000-0x65DFFFFF Intel(R)
6700PXH PCI Express-to-PCI Bridge A - 0329
Memory Address 0x64D00000-0x65DFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64D00000-0x65DFFFFF MegaRAID SCSI
320-4X RAID Controller
```

```
Memory Address 0x5A100000-0x5C1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5A100000-0x5C1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5A100000-0x5C1FFFFF MegaRAID SCSI
320-2E RAID Controller
```

```
Memory Address 0x58000000-0x5A0FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x58000000-0x5A0FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x58000000-0x5A0FFFFF MegaRAID SCSI
320-2E RAID Controller
```

System Summary

System Information report written at: 03/30/06 14:09:54
System Name: NOCONA_QUAD
[System Summary]

```
Item Value
OS Name Microsoft(R) Windows(R) Server 2003,
Enterprise Edition
Version 5.2.3790 Service Pack 1 Build 3790
Other OS Description Not Available
OS Manufacturer Microsoft Corporation
System Name NOCONA_QUAD
System Manufacturer Itautec
System Model ZX400 .....
System Type X86-based PC
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel
~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel
~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel
~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel
~2992 Mhz
BIOS Version/Date Intel Corporation
SHW40.86B.P.06.00.0031.102420051454, 24/10/2005
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolume13
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.1830
(srv03_spl_rtm.050324-1447)"
User Name NOCONA_QUAD\Administrator
Time Zone E. South America Standard Time
Total Physical Memory 32,761,14 MB
Available Physical Memory 2,60 GB
Total Virtual Memory 1,42 GB
Available Virtual Memory 586,58 MB
```

Memory Address 0x64500000-0x646FFFFF PCI standard
 PCI-to-PCI bridge
 Memory Address 0x64500000-0x646FFFFF PCI standard
 PCI-to-PCI bridge
 Memory Address 0x64500000-0x646FFFFF PCI standard
 PCI-to-PCI bridge
 Memory Address 0x64500000-0x646FFFFF MegaRAID SCSI
 320-2X RAID Controller
 I/O Port 0x00004000-0x00005FFF PCI standard
 PCI-to-PCI bridge
 I/O Port 0x00004000-0x00005FFF Intel(R)
 6700PXH PCI Express-to-PCI Bridge A - 0329
 Memory Address 0x66F00000-0x67FFFFFF PCI standard
 PCI-to-PCI bridge
 Memory Address 0x66F00000-0x67FFFFFF PCI standard
 PCI-to-PCI bridge
 Memory Address 0x66F00000-0x67FFFFFF MegaRAID SCSI
 320-2E RAID Controller
 Memory Address 0xFFE00000-0xFFFFFFFF PCI bus
 Memory Address 0xFFE00000-0xFFFFFFFF Intel(R) 82802
 Firmware Hub Device

[DMA]

Resource Device Status
 Channel 4 Direct memory access controller OK

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource Device Status
 0x00000000-0x00000CF7 PCI bus OK
 0x00000000-0x00000CF7 Direct memory access
 controller OK
 0x00000D00-0x0000FFFF PCI bus OK
 0x00009000-0x00009FFF PCI standard PCI-to-PCI
 bridge OK
 0x00008000-0x00008FFF PCI standard PCI-to-PCI
 bridge OK
 0x00007000-0x00007FFF PCI standard PCI-to-PCI
 bridge OK
 0x00006000-0x00006FFF PCI standard PCI-to-PCI
 bridge OK
 0x00004000-0x00005FFF PCI standard PCI-to-PCI
 bridge OK
 0x00004000-0x00005FFF Intel(R) 6700PXH PCI
 Express-to-PCI Bridge A - 0329 OK
 0x00003000-0x00003FFF PCI standard PCI-to-PCI
 bridge OK
 0x00003000-0x00003FFF PCI standard PCI-to-PCI
 bridge OK
 0x00003000-0x00003FFF LSI Logic PCI-X Ultra320
 SCSI Host Adapter OK
 0x00003C00-0x00003CFF LSI Logic PCI-X Ultra320
 SCSI Host Adapter OK
 0x0000A060-0x0000A07F Standard Universal PCI to
 USB Host Controller OK
 0x0000A040-0x0000A05F Standard Universal PCI to
 USB Host Controller OK
 0x0000A020-0x0000A03F Standard Universal PCI to
 USB Host Controller OK
 0x00002000-0x000020FF RADEON 7000 RADEON VE
 Family (Microsoft Corporation) OK

0x000003B0-0x000003BB RADEON 7000 RADEON VE
 Family (Microsoft Corporation) OK
 0x000003C0-0x000003DF RADEON 7000 RADEON VE
 Family (Microsoft Corporation) OK
 0x00000A79-0x00000A79 ISAPNP Read Data Port
 OK
 0x00000279-0x00000279 ISAPNP Read Data Port
 OK
 0x00000274-0x00000277 ISAPNP Read Data Port
 OK
 0x00000080-0x00000091 Direct memory access
 controller OK
 0x00000093-0x0000009F Direct memory access
 controller OK
 0x000000C0-0x000000DF Direct memory access
 controller OK
 0x00000070-0x00000077 System CMOS/real time
 clock OK
 0x00000020-0x0000003D Programmable interrupt
 controller OK
 0x000000A0-0x000000BD Programmable interrupt
 controller OK
 0x000004D0-0x000004D1 Programmable interrupt
 controller OK
 0x000000F0-0x000000F0 Numeric data processor
 OK
 0x00000040-0x00000043 System timer OK
 0x00000050-0x00000053 System timer OK
 0x00000061-0x00000061 System speaker OK
 0x00000400-0x000004BF Motherboard resources
 OK
 0x00000092-0x00000092 Motherboard resources
 OK
 0x00000800-0x0000087F Motherboard resources
 OK
 0x000003F0-0x000003F5 Motherboard resources
 OK
 0x000003F7-0x000003F7 Motherboard resources
 OK
 0x00000880-0x00000883 Motherboard resources
 OK
 0x00000CA2-0x00000CA3 Motherboard resources
 OK
 0x00000CA4-0x00000CA5 Motherboard resources
 OK
 0x000003F8-0x000003FF Communications Port
 (COM1) OK
 0x000002F8-0x000002FF Communications Port
 (COM2) OK
 0x00000060-0x00000060 Motherboard resources
 OK
 0x00000064-0x00000064 Motherboard resources
 OK
 0x00000CA6-0x00000CA6 Microsoft ACPI-Compliant
 Embedded Controller OK
 0x00000CA7-0x00000CA7 Microsoft ACPI-Compliant
 Embedded Controller OK
 0x0000A080-0x0000A08F Intel(R) 82801EB Ultra
 ATA Storage Controllers - 24D1 OK
 0x000001F0-0x000001F7 Primary IDE Channel OK
 0x000003F6-0x000003F6 Primary IDE Channel OK
 0x00000170-0x00000177 Secondary IDE Channel
 OK
 0x00000376-0x00000376 Secondary IDE Channel
 OK
 0x0000A000-0x0000A01F Intel(R) 82801EB SMBus
 Controller - 24D3 OK

[IRQs]

Resource Device Status
 IRQ 9 Microsoft ACPI-Compliant System OK
 IRQ 9 Intel(R) 82801EB SMBus Controller - 24D3
 OK
 IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK
 IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK
 IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK
 IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK
 IRQ 18 Standard Universal PCI to USB Host Controller
 OK
 IRQ 47 Intel(R) 6700PXH PCI Express-to-PCI Bridge A
 - 0329 OK
 IRQ 24 MegaRAID SCSI 320-4X RAID Controller OK
 IRQ 48 Broadcom NetXtreme Gigabit Ethernet OK
 IRQ 72 LSI Logic PCI-X Ultra320 SCSI Host Adapter
 OK
 IRQ 73 LSI Logic PCI-X Ultra320 SCSI Host Adapter
 OK
 IRQ 100 MegaRAID SCSI 320-4X RAID Controller OK
 IRQ 102 MegaRAID SCSI 320-2X RAID Controller OK
 IRQ 16 Standard Universal PCI to USB Host Controller
 OK
 IRQ 16 RADEON 7000 RADEON VE Family (Microsoft
 Corporation) OK
 IRQ 19 Standard Universal PCI to USB Host Controller
 OK
 IRQ 23 Standard Enhanced PCI to USB Host Controller
 OK
 IRQ 8 System CMOS/real time clock OK
 IRQ 13 Numeric data processor OK
 IRQ 0 System timer OK
 IRQ 4 Communications Port (COM1) OK
 IRQ 3 Communications Port (COM2) OK
 IRQ 14 Primary IDE Channel OK
 IRQ 15 Secondary IDE Channel OK

[Memory]

Resource Device Status
 0xA0000-0xBFFFF PCI bus OK
 0xA0000-0xBFFFF RADEON 7000 RADEON VE Family
 (Microsoft Corporation) OK
 0x40000000-0x4FFFFFFF PCI bus OK
 0x50000000-0x5FFFFFFF PCI bus OK
 0x50000000-0x5FFFFFFF RADEON 7000 RADEON VE
 Family (Microsoft Corporation) OK
 0xFEC00000-0xFECFFFFFFF PCI bus OK
 0xFED00000-0xFEDFFFFFFF PCI bus OK
 0xFFC00000-0xFFDFFFFFFF PCI bus OK
 0xFFC00000-0xFFDFFFFFFF Intel(R) 82802 Firmware
 Hub Device OK
 0xFFE00000-0xFFFFFFFF PCI bus OK
 0xFFE00000-0xFFFFFFFF Intel(R) 82802 Firmware
 Hub Device OK
 0x6A200000-0x6B2FFFFFFF PCI standard PCI-to-PCI
 bridge OK
 0x6A200000-0x6B2FFFFFFF PCI standard PCI-to-PCI
 bridge OK
 0x6A200000-0x6B2FFFFFFF MegaRAID SCSI 320-2E RAID
 Controller OK


```

0x58000000-0x5A0FFFFF PCI standard PCI-to-PCI
bridge OK
0x58000000-0x5A0FFFFF PCI standard PCI-to-PCI
bridge OK
0x58000000-0x5A0FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x69100000-0x6A1FFFFF PCI standard PCI-to-PCI
bridge OK
0x69100000-0x6A1FFFFF PCI standard PCI-to-PCI
bridge OK
0x69100000-0x6A1FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x5A100000-0x5C1FFFFF PCI standard PCI-to-PCI
bridge OK
0x5A100000-0x5C1FFFFF PCI standard PCI-to-PCI
bridge OK
0x5A100000-0x5C1FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x68000000-0x690FFFFF PCI standard PCI-to-PCI
bridge OK
0x68000000-0x690FFFFF PCI standard PCI-to-PCI
bridge OK
0x68000000-0x690FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x5C200000-0x5E2FFFFF PCI standard PCI-to-PCI
bridge OK
0x5C200000-0x5E2FFFFF PCI standard PCI-to-PCI
bridge OK
0x5C200000-0x5E2FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x66F00000-0x677FFFFF PCI standard PCI-to-PCI
bridge OK
0x66F00000-0x677FFFFF PCI standard PCI-to-PCI
bridge OK
0x66F00000-0x677FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x5E300000-0x603FFFFF PCI standard PCI-to-PCI
bridge OK
0x5E300000-0x603FFFFF PCI standard PCI-to-PCI
bridge OK
0x5E300000-0x603FFFFF MegaRAID SCSI 320-2E RAID
Controller OK
0x64C00000-0x66EFFFFF PCI standard PCI-to-PCI
bridge OK
0x64C00000-0x66EFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A OK
0x64C00000-0x66EFFFFF Broadcom NetXtreme Gigabit Ethernet OK
0x60400000-0x644FFFFF PCI standard PCI-to-PCI
bridge OK
0x60400000-0x644FFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x60400000-0x644FFFFF PCI standard PCI-to-PCI
bridge OK
0x60400000-0x644FFFFF MegaRAID SCSI 320-4X RAID
Controller OK
0x65E00000-0x65E00FFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x64D00000-0x65DFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x64D00000-0x65DFFFFF PCI standard PCI-to-PCI
bridge OK
0x64D00000-0x65DFFFFF MegaRAID SCSI 320-4X RAID
Controller OK
0x64800000-0x64BFFFFF PCI standard PCI-to-PCI
bridge OK
0x64800000-0x64BFFFFF PCI standard PCI-to-PCI
bridge OK
0x64800000-0x64BFFFFF PCI standard PCI-to-PCI
bridge OK
0x64800000-0x64BFFFFF MegaRAID SCSI 320-2X RAID
Controller OK

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0x64500000-0x646FFFFF PCI standard PCI-to-PCI
bridge OK
0x64500000-0x646FFFFF PCI standard PCI-to-PCI
bridge OK
0x64500000-0x646FFFFF PCI standard PCI-to-PCI
bridge OK
0x64500000-0x646FFFFF MegaRAID SCSI 320-2X RAID
Controller OK
0x64A00000-0x64AFFFFF PCI standard PCI-to-PCI
bridge OK
0x64A00000-0x64AFFFFF LSI Logic PCI-X Ultra320
SCSI Host Adapter OK
0x64A10000-0x64A1FFFF LSI Logic PCI-X Ultra320
SCSI Host Adapter OK
0x64A20000-0x64A2FFFF LSI Logic PCI-X Ultra320
SCSI Host Adapter OK
0x64A30000-0x64A3FFFF LSI Logic PCI-X Ultra320
SCSI Host Adapter OK
0x64900000-0x649FFFFF PCI standard PCI-to-PCI
bridge OK
0x64900000-0x649FFFFF MegaRAID SCSI 320-4X RAID
Controller OK
0x64600000-0x646FFFFF PCI standard PCI-to-PCI
bridge OK
0x64600000-0x646FFFFF MegaRAID SCSI 320-4X RAID
Controller OK
0x6B300000-0x6B3003FF Standard Enhanced PCI to
USB Host Controller OK
0x64700000-0x6470FFFF RADEON 7000 RADEON VE
Family (Microsoft Corporation) OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
				c:\windows\system32\msaud32.acm		Microsoft Corporation
				C:\WINDOWS\system32\MSAUD32.ACM	8.00.00.4487	288,00 KB (294.912 bytes)
				c:\windows\system32\msg723.acm		Microsoft Corporation
				C:\WINDOWS\system32\MSG723.ACM	5.2.3790.1830	120,00 KB (122.880 bytes)
				c:\windows\system32\imaadp32.acm		Microsoft Corporation
				C:\WINDOWS\system32\IMAADP32.ACM	5.2.3790.0 (srv03_rtm.030324-2048)	15,50 KB (15.872 bytes)
				c:\windows\system32\tssoft32.acm		DSP GROUP, INC.
				C:\WINDOWS\system32\tssoft32.ACM	9.50	9,50 KB (9.728 bytes)
				c:\windows\system32\l3codeca.acm		Fraunhofer Institut Integrierte Schaltungen IIS
				C:\WINDOWS\system32\L3CODECA.ACM	0, 0305	284,00 KB (290.816 bytes)
				c:\windows\system32\msadp32.acm		Microsoft Corporation

```

C:\WINDOWS\system32\MSADP32.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 14,50
KB (14.848 bytes) 25/3/2003 09:00
c:\windows\system32\msg711.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSG711.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 10,00
KB (10.240 bytes) 25/3/2003 09:00
c:\windows\system32\sl_anet.acm Sipro Lab
Telecom Inc. Sipro Lab Telecom Audio Codec OK
C:\WINDOWS\system32\SL_ANET.ACM 3.02
84,00 KB (86.016 bytes) 25/3/2003 09:00
c:\windows\system32\msgsm32.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSGSM32.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 20,50
KB (20.992 bytes) 25/3/2003 09:00

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
				c:\windows\system32\iyuv_32.dll		Microsoft Corporation
				C:\WINDOWS\system32\IYUV_32.DLL	5.2.3790.1830 (srv03_spl_rtm.050324-1447)	46,50 KB (47.616 bytes)
				c:\windows\system32\msh261.drv		Microsoft Corporation
				C:\WINDOWS\system32\MSH261.DRV	5.2.3790.1830	184,00 KB (188.416 bytes)
				c:\windows\system32\tsbyuv.dll		Microsoft Corporation
				C:\WINDOWS\system32\TSBYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048)	8,00 KB (8.192 bytes)
				c:\windows\system32\msyuv.dll		Microsoft Corporation
				C:\WINDOWS\system32\MSYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048)	16,50 KB (16.896 bytes)
				c:\windows\system32\msvidc32.dll		Microsoft Corporation
				C:\WINDOWS\system32\MSVIDC32.DLL	5.2.3790.0 (srv03_rtm.030324-2048)	26,50 KB (27.136 bytes)
				c:\windows\system32\msh263.drv		Microsoft Corporation
				C:\WINDOWS\system32\MSH263.DRV	5.2.3790.1830	288,00 KB (294.912 bytes)
				c:\windows\system32\msrle32.dll		Microsoft Corporation
				C:\WINDOWS\system32\MSRLE32.DLL	5.2.3790.0 (srv03_rtm.030324-2048)	10,50 KB (10.752 bytes)

[CD-ROM]

Item	Value
Drive E:	CD-ROM Drive
Description	CD-ROM Drive
Media Loaded	No
Media Type	CD-ROM
Name	QSI DVD-ROM SDR-083
Manufacturer	(Standard CD-ROM drives)
Status	OK
Transfer Rate	Not Available

```

SCSI Target ID      0
PNP Device ID      IDE\CDROMQSI_DVD-ROM_SDR-083_____MX13_____5&6FEE0D8&0&0.0.0

Driver c:\windows\system32\drivers\cdrom.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 51,00 KB
(52.224 bytes), 25/3/2003 09:00)

[Sound Device]

Item      Value

[Display]

Item      Value
Name      RADEON 7000 RADEON VE Family (Microsoft
Corporation)
PNP Device ID      PCI\VEN_1002&DEV_5159&SUBSYS_34498086&REV_00\
4&1FE6A6B6&0&00F0
Adapter Type      Radeon 7000 (QY), ATI Technologies
Inc. compatible
Adapter Description RADEON 7000 RADEON VE Family
(Microsoft Corporation)
Adapter RAM      16,00 MB (16.777.216 bytes)
Installed Drivers ati2dvag.dll
Driver Version    5.1.2600.0
INF File          atiixpag.inf (ati2mtag_RV100 section)
Color Planes      1
Color Table Entries 4294967296
Resolution        1024 x 768 x 60 hertz
Bits/Pixel        32
Memory Address    0x50000000-0xPDDFFFFFF
I/O Port          0x00002000-0x000020FF
Memory Address    0x64700000-0x6470FFFF
IRQ Channel       IRQ 16
I/O Port          0x000003B0-0x000003BB
I/O Port          0x000003C0-0x000003DF
Memory Address    0xA0000-0xBFFFF
Driver c:\windows\system32\drivers\ati2mtag.sys
(6.13.10.6153, 439,63 KB (450.176 bytes), 24/1/2006
15:28)

[Infrared]

Item      Value

[Input]

[Keyboard]

Item      Value
Description USB Human Interface Device
Name        Enhanced (101- or 102-key)
Layout      00010416
PNP Device ID      USB\VID_0A81&PID_0205&MI_00\6&911F78F&0&0000

Number of Function Keys 12
Driver c:\windows\system32\drivers\hidusb.sys
(5.2.3790.0 (srv03_rtm.030324-2048), 11,50 KB (11.776
bytes), 25/3/2003 09:00)

[Pointing Device]

Item      Value
Hardware Type      HID-compliant mouse
Number of Buttons  5
Status            OK

```

```

PNP Device ID      HID\VID_0A81&PID_0205&MI_01&COL01\7&2845102F&
0&0000
Power Management Supported No
Double Click Threshold 6
Handedness        Right Handed Operation
Driver c:\windows\system32\drivers\mouhid.sys
(5.2.3790.0 (srv03_rtm.030324-2048), 13,00 KB (13.312
bytes), 24/3/2003 20:03)

[Modem]

Item      Value

[Network]

[Adapter]

Item      Value
Name      [00000001] RAS Async Adapter
Adapter Type      Not Available
Product Type      RAS Async Adapter
Installed Yes
PNP Device ID      Not Available
Last Reset        23/3/2006 11:12
Index          1
Service Name      AsyncMac
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address       Not Available

Name      [00000002] WAN Miniport (L2TP)
Adapter Type      Not Available
Product Type      WAN Miniport (L2TP)
Installed Yes
PNP Device ID      ROOT\MS_L2TPMINIPOINT\0000
Last Reset        23/3/2006 11:12
Index          2
Service Name      Rasl2tp
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address       Not Available
Driver c:\windows\system32\drivers\rasl2tp.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 66,00 KB
(67.584 bytes), 25/3/2003 09:00)

Name      [00000003] WAN Miniport (PPTP)
Adapter Type      Wide Area Network (WAN)
Product Type      WAN Miniport (PPTP)
Installed Yes
PNP Device ID      ROOT\MS_PPTPMINIPOINT\0000
Last Reset        23/3/2006 11:12
Index          3
Service Name      PptpMiniport
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available

```

```

DHCP Lease Obtained Not Available
MAC Address        50:50:54:50:30:30
Driver c:\windows\system32\drivers\rasppoe.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 61,00 KB
(62.464 bytes), 25/3/2003 09:00)

Name      [00000004] WAN Miniport (PPPOE)
Adapter Type      Wide Area Network (WAN)
Product Type      WAN Miniport (PPPOE)
Installed Yes
PNP Device ID      ROOT\MS_PPPOEMINIPOINT\0000
Last Reset        23/3/2006 11:12
Index          4
Service Name      RasPppoe
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address        33:50:6F:45:30:30
Driver c:\windows\system32\drivers\rasppoe.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 40,00 KB
(40.960 bytes), 25/3/2003 09:00)

Name      [00000005] Direct Parallel
Adapter Type      Not Available
Product Type      Direct Parallel
Installed Yes
PNP Device ID      ROOT\MS_PTMINIPOINT\0000
Last Reset        23/3/2006 11:12
Index          5
Service Name      Raspti
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address        Not Available
Driver c:\windows\system32\drivers\raspti.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 19,50 KB
(19.968 bytes), 25/3/2003 09:00)

Name      [00000006] WAN Miniport (IP)
Adapter Type      Not Available
Product Type      WAN Miniport (IP)
Installed Yes
PNP Device ID      ROOT\MS_NDISWANIP\0000
Last Reset        23/3/2006 11:12
Index          6
Service Name      Ndiswan
IP Address        Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled      No
DHCP Server       Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address        Not Available
Driver c:\windows\system32\drivers\ndiswan.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 91,00 KB
(93.184 bytes), 25/3/2003 09:00)

Name      [00000007] Broadcom NetXtreme Gigabit
Ethernet
Adapter Type      Ethernet 802.3
Product Type      Broadcom NetXtreme Gigabit Ethernet

Installed Yes

```

PNP Device ID
 PCI\VEN_14E4&DEV_1648&SUBSYS_34498086&REV_10\
 5&188E7AD5&0&100230
 Last Reset 23/3/2006 11:12
 Index 7
 Service Name b57w2k
 IP Address 192.168.0.10
 IP Subnet 255.255.255.0
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 00:0E:0C:42:91:9D
 Memory Address 0x64C00000-0x66EFFFFF
 IRQ Channel IRQ 48
 Driver c:\windows\system32\drivers\b57xp32.sys
 (8.48.0.0 built by: WinDDK, 139,38 KB (142.720 bytes),
 25/1/2006 14:27)

Name [00000008] Broadcom NetXtreme Gigabit
 Ethernet
 Adapter Type Not Available
 Product Type Broadcom NetXtreme Gigabit Ethernet

Installed Yes
 PNP Device ID
 PCI\VEN_14E4&DEV_1648&SUBSYS_34498086&REV_10\
 5&188E7AD5&0&110230
 Last Reset 23/3/2006 11:12
 Index 8
 Service Name b57w2k
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled Yes
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Driver c:\windows\system32\drivers\b57xp32.sys
 (8.48.0.0 built by: WinDDK, 139,38 KB (142.720 bytes),
 25/1/2006 14:27)

[Protocol]
 Item Value
 Name MSAPFD Tcpip [TCP/IP]
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 16 bytes
 Maximum Message Size 0 bytes
 Message Oriented No
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data Yes
 Supports Graceful Closing Yes
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD Tcpip [UDP/IP]
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 16 bytes
 Maximum Message Size 63,93 KB (65.467 bytes)

Message Oriented Yes
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting Yes
 Name RSVP UDP Service Provider
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 16 bytes
 Maximum Message Size 63,93 KB (65.467 bytes)

Message Oriented Yes
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption Yes
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting Yes

Name RSVP TCP Service Provider
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 16 bytes
 Maximum Message Size 0 bytes
 Message Oriented No
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption Yes
 Supports Expedited Data Yes
 Supports Graceful Closing Yes
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD NetBIOS [\Device\NetBT_Tcpip_{851DD483-4F55-4A2D-A2D6-3DF35609BBDD}] SEQPACKE
 T 3
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD NetBIOS [\Device\NetBT_Tcpip_{851DD483-4F55-4A2D-A2D6-3DF35609BBDD}] DATAGRAM 3
 Connectionless Service Yes

Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD NetBIOS [\Device\NetBT_Tcpip_{6C504203-1ACB-45AA-8FC2-28385CE06E31}] SEQPACKE
 T 0
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD NetBIOS [\Device\NetBT_Tcpip_{6C504203-1ACB-45AA-8FC2-28385CE06E31}] DATAGRAM 0
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAPFD NetBIOS [\Device\NetBT_Tcpip_{A371BA5F-67CE-409A-8833-A275615E934A}] SEQPACKE
 T 1
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No

Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\\Device\NetBT_Tcpip_{A371BA5F-67CE-409A-8833-A275615E934A}] DATAGRAM 1
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\\Device\NetBT_Tcpip_{BCEB6323-8BCC-4024-AE4A-9C6C802EB6E9}] SEQPACKET 2
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\\Device\NetBT_Tcpip_{BCEB6323-8BCC-4024-AE4A-9C6C802EB6E9}] DATAGRAM 2
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

[WinSock]

Item Value
File c:\windows\system32\winsock.dll
Size 2,80 KB (2.864 bytes)
Version 3.10

File c:\windows\system32\wsock32.dll
Size 22,00 KB (22.528 bytes)
Version 5.2.3790.0 (srv03_rtm.030324-2048)

[Ports]

[Serial]

Item Value
Name Communications Port (COM1)
Status OK
PNP Device ID ACPI\PNP0501\1
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on Xoff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
Xoff Character 19
XoffXmit Threshold 512
Xon Character 17
XonXmit Threshold 2048
XonXoff InFlow Control 0
XonXoff OutFlow Control 0
I/O Port 0x000003F8-0x000003FF
IRQ Channel IRQ 4
Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 64,00 KB
(65.536 bytes), 25/3/2003 09:00)

Name Communications Port (COM2)
Status OK
PNP Device ID ACPI\PNP0501\2
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No

Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on Xoff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
Xoff Character 19
XoffXmit Threshold 512
Xon Character 17
XonXmit Threshold 2048
XonXoff InFlow Control 0
XonXoff OutFlow Control 0
I/O Port 0x000002F8-0x000002FF
IRQ Channel IRQ 3
Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 64,00 KB
(65.536 bytes), 25/3/2003 09:00)

[Parallel]

Item Value

[Storage]

[Drives]

Item Value
Drive C:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 34,24 GB (36.766.965.760 bytes)
Free Space 27,95 GB (30.013.415.424 bytes)

Volume Name Files
Volume Serial Number F4BCEC2B
Drive D:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 34,18 GB (36.701.163.520 bytes)
Free Space 31,33 GB (33.641.357.312 bytes)

Volume Name Files
Volume Serial Number 18EA0649

Drive E:
Description CD-ROM Disc

Drive G:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available

Volume Serial Number Not Available

Drive H:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive I:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive J:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive L:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive M:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive N:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive O:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive P:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available

Volume Serial Number Not Available

[Disks]

Item Value
Description Disk drive
Manufacturer (Standard disk drives)
Model MAXTOR ATLAS15K2_36SCA SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 1
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 9
SCSI Target ID 0
Sectors/Track 63
Size 34,25 GB (36.775.226.880 bytes)
Total Cylinders 4.471
Total Sectors 71.826.615
Total Tracks 1.140.105
Tracks/Cylinder 255
Partition Disk #5, Partition #0
Partition Size 34,24 GB (36.766.969.344 bytes)

Partition Starting Offset 32.256 bytes
Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 6
SCSI Target ID 0
Sectors/Track 63
Size 957,00 GB (1.027.567.779.840 bytes)
Total Cylinders 124.928
Total Sectors 2.006.968.320
Total Tracks 31.856.640
Tracks/Cylinder 255
Partition Disk #3, Partition #0
Partition Size 39,07 GB (41.948.895.744 bytes)

Partition Starting Offset 32.256 bytes
Partition Disk #3, Partition #1
Partition Size 78,13 GB (83.889.630.720 bytes)
Partition Starting Offset 41.948.928.000 bytes
Partition Disk #3, Partition #2
Partition Size 781,25 GB (838.863.406.080 bytes)
Partition Starting Offset 125.838.558.720 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 4
SCSI Target ID 0

Sectors/Track 63
Size 957,00 GB (1.027.567.779.840 bytes)
Total Cylinders 124.928
Total Sectors 2.006.968.320
Total Tracks 31.856.640
Tracks/Cylinder 255
Partition Disk #2, Partition #0
Partition Size 39,07 GB (41.948.895.744 bytes)

Partition Starting Offset 32.256 bytes
Partition Disk #2, Partition #1
Partition Size 78,13 GB (83.889.630.720 bytes)
Partition Starting Offset 41.948.928.000 bytes
Partition Disk #2, Partition #2
Partition Size 781,25 GB (838.863.406.080 bytes)
Partition Starting Offset 125.838.558.720 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 2
SCSI Target ID 0
Sectors/Track 63
Size 938,77 GB (1.007.991.613.440 bytes)
Total Cylinders 122.548
Total Sectors 1.968.733.620
Total Tracks 31.249.740
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size 39,07 GB (41.948.895.744 bytes)
Partition Starting Offset 32.256 bytes
Partition Disk #0, Partition #1
Partition Size 78,13 GB (83.889.630.720 bytes)

Partition Starting Offset 41.948.928.000 bytes
Partition Disk #0, Partition #2
Partition Size 781,25 GB (838.863.406.080 bytes)
Partition Starting Offset 125.838.558.720 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 8
SCSI Target ID 0
Sectors/Track 63
Size 957,00 GB (1.027.567.779.840 bytes)
Total Cylinders 124.928
Total Sectors 2.006.968.320
Total Tracks 31.856.640
Tracks/Cylinder 255

Partition Disk #4, Partition #0
 Partition Size 39,07 GB (41.948.895.744 bytes)

Partition Starting Offset 32.256 bytes
 Partition Disk #4, Partition #1
 Partition Size 78,13 GB (83.889.630.720 bytes)

Partition Starting Offset 41.948.928.000 bytes

Partition Disk #4, Partition #2
 Partition Size 781,25 GB (838.863.406.080 bytes)

Partition Starting Offset 125.838.558.720 bytes

Description Disk drive
 Manufacturer (Standard disk drives)
 Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 1
 SCSI Bus 3
 SCSI Logical Unit 0
 SCSI Port 3
 SCSI Target ID 0
 Sectors/Track 63
 Size 273,45 GB (293.609.594.880 bytes)
 Total Cylinders 35.696
 Total Sectors 573.456.240
 Total Tracks 9.102.480
 Tracks/Cylinder 255
 Partition Disk #1, Partition #0
 Partition Size 244,14 GB (262.147.866.624 bytes)

Partition Starting Offset 32.256 bytes

Description Disk drive
 Manufacturer (Standard disk drives)
 Model SEAGATE ST336753LC SCSI Disk Device

Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 1
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 9
 SCSI Target ID 1
 Sectors/Track 63
 Size 34,18 GB (36.701.199.360 bytes)
 Total Cylinders 4.462
 Total Sectors 71.682.030
 Total Tracks 1.137.810
 Tracks/Cylinder 255
 Partition Disk #6, Partition #0
 Partition Size 34,18 GB (36.701.167.104 bytes)

Partition Starting Offset 32.256 bytes

[SCSI]

Item	Value
Name	MegaRAID SCSI 320-2E RAID Controller
Manufacturer	LSI Logic Corp.,
Status	OK
PNP Device ID	PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&5B3BB31&0&700008
Memory Address	0x58000000-0x5A0FFFFF
Memory Address	0x6A200000-0x6B2FFFFF
IRQ Channel	IRQ 18

Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name MegaRAID SCSI 320-2E RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&1376317A&0&700010

Memory Address 0x5A100000-0x5C1FFFFF
 Memory Address 0x69100000-0x6A1FFFFF
 IRQ Channel IRQ 18
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name MegaRAID SCSI 320-2E RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&1058B1A0&0&700020

Memory Address 0x5C200000-0x5E2FFFFF
 Memory Address 0x68000000-0x690FFFFF
 IRQ Channel IRQ 18
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name MegaRAID SCSI 320-2E RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\5&3359270C&0&700028

Memory Address 0x5E300000-0x603FFFFF
 Memory Address 0x66F00000-0x67FFFFF
 IRQ Channel IRQ 18
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name MegaRAID SCSI 320-4X RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\6&39D01C69&0&00100030

Memory Address 0x60400000-0x644FFFFF
 Memory Address 0x64D00000-0x65DFFFFF
 IRQ Channel IRQ 24
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter
 Manufacturer LSI Logic Inc.
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0030&SUBSYS_34498086&REV_08\5&203851D&0&280038

I/O Port 0x00003C00-0x00003CFF
 Memory Address 0x64A00000-0x64AFFFFF
 Memory Address 0x64A10000-0x64A1FFFF
 IRQ Channel IRQ 72
 Driver c:\windows\system32\drivers\symmpi.sys
 (1.10.05.00 (NT.041118-1101), 48,50 KB (49.664 bytes), 25/3/2003 09:00)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter
 Manufacturer LSI Logic Inc.
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0030&SUBSYS_34498086&REV_08\5&203851D&0&290038

I/O Port 0x00003000-0x00003FFF
 Memory Address 0x64A20000-0x64A2FFFF
 Memory Address 0x64A30000-0x64A3FFFF
 IRQ Channel IRQ 73
 Driver c:\windows\system32\drivers\symmpi.sys
 (1.10.05.00 (NT.041118-1101), 48,50 KB (49.664 bytes), 25/3/2003 09:00)

Name MegaRAID SCSI 320-4X RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\6&348B5EA3&0&0030238

Memory Address 0x64600000-0x646FFFFF
 Memory Address 0x64900000-0x649FFFFF
 IRQ Channel IRQ 100
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

Name MegaRAID SCSI 320-2X RAID Controller
 Manufacturer LSI Logic Corp.,
 Status OK
 PNP Device ID PCI\VEN_1000&DEV_0407&SUBSYS_05321000&REV_02\6&2D8A86B5&0&00380238

Memory Address 0x64500000-0x646FFFFF
 Memory Address 0x64800000-0x64BFFFFF
 IRQ Channel IRQ 102
 Driver c:\windows\system32\drivers\mraid35x.sys
 (6.45.2.32 built by: WinDDK, 25,50 KB (26.112 bytes), 25/1/2006 13:33)

[IDE]

Item	Value
Name	Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1
Manufacturer	Intel
Status	OK
PNP Device ID	PCI\VEN_8086&DEV_24D1&SUBSYS_34498086&REV_02\3&1FCE7BBF&0&FA
I/O Port	0x0000A080-0x0000A08F
Driver	c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 7,50 KB (7.680 bytes), 24/1/2006 15:27)

Name	Value
Name	Primary IDE Channel
Manufacturer	(Standard IDE ATA/ATAPI controllers)
Status	OK
PNP Device ID	PCI\IDE\IDECHANNEL\4&6EDE9F8&0&0
I/O Port	0x000001F0-0x000001F7
I/O Port	0x000003F6-0x000003FF
IRQ Channel	IRQ 14
Driver	c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 93,50 KB (95.744 bytes), 25/3/2003 09:00)

Name	Value
Name	Secondary IDE Channel
Manufacturer	(Standard IDE ATA/ATAPI controllers)

Status OK
 PNP Device ID PCI\VEN_14E4&DEV_1648&SUBSYS_34498086&REV_10\5&188E7AD5&0&110230 This device is disabled.

I/O Port 0x00000170-0x00000177
 I/O Port 0x00000376-0x00000376
 IRQ Channel IRQ 15
 Driver c:\windows\system32\drivers\atapi.sys
 (5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 93,50 KB
 (95,744 bytes), 25/3/2003 09:00)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code
 Broadcom NetXtreme Gigabit Ethernet #2
 PCI\VEN_14E4&DEV_1648&SUBSYS_34498086&REV_10\5&188E7AD5&0&110230 This device is disabled.

[USB]

Device PNP Device ID Error Code
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D2&SUBSYS_34498086&REV_02\3&1FCE7BBF&0&E8
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D4&SUBSYS_34498086&REV_02\3&1FCE7BBF&0&E9
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D7&SUBSYS_34498086&REV_02\3&1FCE7BBF&0&EA
 Standard Enhanced PCI to USB Host Controller
 PCI\VEN_8086&DEV_24DD&SUBSYS_34498086&REV_02\3&1FCE7BBF&0&EF

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Mode	Status	Control	Accept	Pause
abiosdsk	Abiosdsk	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Yes	Normal	Running	OK	Yes	
acpiec	Microsoft Embedded Controller Driver	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	Yes	Normal	Running	OK	Yes	
adpu160m	adpu160m	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
adpu320	adpu320	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
afcnt	afcnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Normal	Running	OK	System	

	Running	OK	Normal	No	Yes				
ahal154x	Ahal154x	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
aliide	AliIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Yes	Normal	Running	OK	No	Yes
atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
ati2mtag	ati2mtag	c:\windows\system32\drivers\ati2mtag.sys	Kernel Driver	Yes	Manual	Running	OK	Ignore	No
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No
b57w2k	Broadcom NetXtreme Gigabit Ethernet	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	Yes
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes	System	Running	OK	Normal	No
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
cd20xrnt	cd20xrnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	System Driver	Yes	Disabled	Running	OK	Normal	Yes
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Yes	System	Running	OK	Normal	Yes
changer	Changer	Not Available	Kernel Driver	No	System	Stopped	OK		

clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
cmdide	CmdIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cpqarray	Cpqarray	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cpqarray2	cpqarray2	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cpqcissm	cpqcissm	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cpqfcalm	cpqfcalm	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
crdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crdisk.sys	Kernel Driver	Yes	Normal	Running	OK	No	Yes
dac960nt	dac960nt	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
dellcerc	dellcerc	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
dfsdriver	DfsDriver	c:\windows\system32\drivers\dfs.sys	File System Driver	Yes	Normal	Running	OK	No	Yes
disk	Disk Driver	c:\windows\system32\drivers\disk.sys	Kernel Driver	Yes	Normal	Running	OK	No	Yes
dmboot	dmboot	c:\windows\system32\drivers\dmboot.sys	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
dmio	Logical Disk Manager Driver	c:\windows\system32\drivers\dmio.sys	Kernel Driver	Yes	Normal	Running	OK	No	Yes
dmload	dmload	c:\windows\system32\drivers\dmload.sys	Kernel Driver	Yes	Normal	Running	OK	No	Yes
dpti2o	dpti2o	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
fastfat	Fastfat	c:\windows\system32\drivers\fastfat.sys	System Driver	No	Disabled	Stopped	OK	Normal	No
fdc	Fdc	c:\windows\system32\drivers\fdc.sys	Kernel Driver	No	Ignore	Stopped	OK		No
fips	Fips	c:\windows\system32\drivers\fips.sys	Kernel Driver	Yes	System	Running	OK	Normal	Yes

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flpydisk Flpydisk
c:\windows\system32\drivers\flpydisk.sys
Kernel Driver No System
Stopped OK Ignore No No

fltmgr FltMgr
c:\windows\system32\drivers\fltmgr.sys File
System Driver Yes Boot Running OK
Normal No Yes

ftdisk Volume Manager Driver
c:\windows\system32\drivers\ftdisk.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

gpc Generic Packet Classifier
c:\windows\system32\drivers\msgpc.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

hidusb Microsoft HID Class Driver
c:\windows\system32\drivers\hidusb.sys
Kernel Driver Yes Manual
Running OK Ignore No Yes

hpn hpn Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

hpt3xx hpt3xx Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

http HTTP
c:\windows\system32\drivers\http.sys
Kernel Driver No Manual
Stopped OK Normal No No

i2omgmt i2omgmt Not Available Kernel Driver
No System Stopped OK
Normal No No

i2omp i2omp Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

i8042prt i8042prt
c:\windows\system32\drivers\i8042prt.sys
Kernel Driver No System
Stopped OK Ignore No No

iirsp iirsp Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

imapi CD-Burning Filter Driver
c:\windows\system32\drivers\imapi.sys
Kernel Driver No System
Stopped OK Normal No No

intelide IntelIde
c:\windows\system32\drivers\intelide.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

intelppm Intel Processor Driver
c:\windows\system32\drivers\intelppm.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

ip6fw IPv6 Windows Firewall Driver
c:\windows\system32\drivers\ip6fw.sys
Kernel Driver No Manual
Stopped OK Normal No No

ipfilterdriver IP Traffic Filter Driver
c:\windows\system32\drivers\ipfltdrv.sys
Kernel Driver No Manual

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Stopped OK Normal No No

ipinip IP in IP Tunnel Driver
c:\windows\system32\drivers\ipinip.sys
Kernel Driver No Manual
Stopped OK Normal No No

ipnat IP Network Address Translator
c:\windows\system32\drivers\ipnat.sys
Kernel Driver No Manual
Stopped OK Normal No No

ipsecc IPSEC driver
c:\windows\system32\drivers\ipsecc.sys
Kernel Driver Yes System
Running OK Normal No Yes

ipsraidn ipsraidn Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

isapnp PnP ISA/EISA Bus Driver
c:\windows\system32\drivers\isapnp.sys
Kernel Driver Yes Boot
Running OK Critical No Yes

kbdclass Keyboard Class Driver
c:\windows\system32\drivers\kbdclass.sys
Kernel Driver Yes System
Running OK Normal No Yes

kbdhid Keyboard HID Driver
c:\windows\system32\drivers\kbdhid.sys
Kernel Driver Yes System
Running OK Ignore No Yes

ksecdd KSecDD
c:\windows\system32\drivers\ksecdd.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

lp6nds35 lp6nds35 Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

mmdd mmdd
c:\windows\system32\drivers\mmdd.sys
Kernel Driver Yes System
Running OK Ignore No Yes

modem Modem
c:\windows\system32\drivers\modem.sys
Kernel Driver No Manual
Stopped OK Ignore No No

mouclass Mouse Class Driver
c:\windows\system32\drivers\mouclass.sys
Kernel Driver Yes System
Running OK Normal No Yes

mouhid Mouse HID Driver
c:\windows\system32\drivers\mouhid.sys
Kernel Driver Yes Manual
Running OK Ignore No Yes

mountmgr Mount Point Manager
c:\windows\system32\drivers\mountmgr.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

mraid35x mraid35x
c:\windows\system32\drivers\mraid35x.sys
Kernel Driver Yes Boot

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```

Running OK Normal No Yes

mrxdav WebDav Client Redirector
c:\windows\system32\drivers\mrxdav.sys File
System Driver No Manual Stopped OK
Normal No No

mrxsmb MRXSMB
c:\windows\system32\drivers\mrxsmb.sys File
System Driver Yes System Running OK
Normal No Yes

msfs Msfs
c:\windows\system32\drivers\msfs.sys File
System Driver Yes System Running OK
Normal No Yes

mssmbios Microsoft System Management BIOS Driver
c:\windows\system32\drivers\mssmbios.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

mup Mup
c:\windows\system32\drivers\mup.sys
File System Driver Yes Boot
Running OK Normal No Yes

ndis NDIS System Driver
c:\windows\system32\drivers\ndis.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

ndistapi Remote Access NDIS TAPI Driver
c:\windows\system32\drivers\ndistapi.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

ndisuio NDIS Usermode I/O Protocol
c:\windows\system32\drivers\ndisuio.sys
Kernel Driver No Manual
Stopped OK Normal No No

ndiswan Remote Access NDIS WAN Driver
c:\windows\system32\drivers\ndiswan.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

ndproxy NDIS Proxy
c:\windows\system32\drivers\ndproxy.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

netbios NetBIOS Interface
c:\windows\system32\drivers\netbios.sys File
System Driver Yes System Running OK
Normal No Yes

netbt NetBios over Tcpip
c:\windows\system32\drivers\netbt.sys
Kernel Driver Yes System
Running OK Normal No Yes

nfrd960 nfrd960 Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

npfs Npfs
c:\windows\system32\drivers\npfs.sys File
System Driver Yes System Running OK
Normal No Yes

ntfs Ntfs
c:\windows\system32\drivers\ntfs.sys File
System Driver Yes Disabled Running OK
Normal No Yes

null Null
c:\windows\system32\drivers\null.sys
Kernel Driver Yes System

```


	Running	OK	Normal	No	Yes
parport	Parport c:\windows\system32\drivers\parport.sys Kernel Driver Stopped	No Manual OK	Ignore	No	No
partmgr	Partition Manager c:\windows\system32\drivers\partmgr.sys Kernel Driver Running	Yes Boot OK	Normal	No	Yes
pci	PCI Bus Driver c:\windows\system32\drivers\pci.sys Kernel Driver Running	Yes Boot OK	Critical	No	Yes
pciide	PCIIDE c:\windows\system32\drivers\pciide.sys Kernel Driver Running	Yes Boot OK	Normal	No	Yes
pcmcia	Pcmcia c:\windows\system32\drivers\pcmcia.sys Kernel Driver Stopped	No Disabled OK	Normal	No	No
pdcomp	PDCOMP Not Available Manual	Stopped OK	Kernel Driver		
pdframe	PDFRAME Not Available Manual	Stopped OK	Kernel Driver		
pdreli	PDRELI Not Available Manual	Stopped OK	Kernel Driver		
pdrframe	PDRFRAME Not Available Manual	Stopped OK	Kernel Driver		
perc2	perc2 Not Available Disabled	Stopped OK	Kernel Driver		
perc2hib	perc2hib Not Available Disabled	Stopped OK	Kernel Driver		
pptpminiport	WAN Miniport (PPTP) c:\windows\system32\drivers\raspttp.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
processor	Processor Driver c:\windows\system32\drivers\processr.sys Kernel Driver Stopped	No Manual OK	Normal	No	No
ptilink	Direct Parallel Link Driver c:\windows\system32\drivers\ptilink.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
ql1080	ql1080 Not Available Disabled	Stopped OK	Kernel Driver		
ql10wnt	ql10wnt Not Available Disabled	Stopped OK	Kernel Driver		
ql12160	ql12160 Not Available Disabled	Stopped OK	Kernel Driver		
ql1240	ql1240 Not Available Disabled	Stopped OK	Kernel Driver		

ql1280	ql1280 Not Available Disabled	Stopped OK	Kernel Driver		
ql2100	ql2100 Not Available Disabled	Stopped OK	Kernel Driver		
ql2200	ql2200 Not Available Disabled	Stopped OK	Kernel Driver		
ql2300	ql2300 Not Available Disabled	Stopped OK	Kernel Driver		
rasacd	Remote Access Auto Connection Driver c:\windows\system32\drivers\rasacd.sys Kernel Driver Running	Yes System OK	Normal	No	Yes
rasl2tp	WAN Miniport (L2TP) c:\windows\system32\drivers\rasl2tp.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
rasppoe	Remote Access PPPoE Driver c:\windows\system32\drivers\rasppoe.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
raspti	Direct Parallel c:\windows\system32\drivers\raspti.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
rdbss	Rdbss c:\windows\system32\drivers\rdbss.sys System Driver Running	Yes System OK	Normal	No	Yes
rdpdd	RDPDCC c:\windows\system32\drivers\rdpdd.sys Kernel Driver Running	Yes System OK	Ignore	No	Yes
rdpdr	Terminal Server Device Redirector Driver c:\windows\system32\drivers\rdpdr.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
rdpwd	RDPWD c:\windows\system32\drivers\rdpwd.sys Kernel Driver Stopped	No Manual OK	Ignore	No	No
redbook	Digital CD Audio Playback Filter Driver c:\windows\system32\drivers\redbook.sys Kernel Driver Running	Yes System OK	Normal	No	Yes
secdrv	Secdrv c:\windows\system32\drivers\secdrv.sys Kernel Driver Stopped	No Manual OK	Normal	No	No
serenum	Serenum Filter Driver c:\windows\system32\drivers\serenum.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
serial	Serial port driver c:\windows\system32\drivers\serial.sys Kernel Driver Running	Yes System OK	Ignore	No	Yes

sfloppy	Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel Driver Stopped	No System OK	Ignore	No	No
simbad	Simbad Not Available Disabled	Stopped OK	Kernel Driver		
sparrow	Sparrow Not Available Disabled	Stopped OK	Kernel Driver		
srv	Srv c:\windows\system32\drivers\srv.sys File System Driver Stopped	No Manual OK	Normal	No	No
swenum	Software Bus Driver c:\windows\system32\drivers\swenum.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes
symc810	symc810 Not Available Disabled	Stopped OK	Kernel Driver		
symc8xx	symc8xx Not Available Disabled	Stopped OK	Kernel Driver		
symmpi	symmpi c:\windows\system32\drivers\symmpi.sys Kernel Driver Running	Yes Boot OK	Normal	No	Yes
sym_hi	sym_hi Not Available Disabled	Stopped OK	Kernel Driver		
sym_u3	sym_u3 Not Available Disabled	Stopped OK	Kernel Driver		
tcpip	TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel Driver Running	Yes System OK	Normal	No	Yes
tdpipe	TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel Driver Stopped	No Manual OK	Ignore	No	No
tdtcp	TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Stopped	No Manual OK	Ignore	No	No
termdd	Terminal Device Driver c:\windows\system32\drivers\termdd.sys Kernel Driver Running	Yes System OK	Normal	No	Yes
toside	TosIde Not Available Disabled	Stopped OK	Kernel Driver		
udfs	Udfs c:\windows\system32\drivers\udfs.sys System Driver Running	No Disabled OK	Stopped		
ultra	ultra Not Available Disabled	Stopped OK	Kernel Driver		
update	Microcode Update Driver c:\windows\system32\drivers\update.sys Kernel Driver Running	Yes Manual OK	Normal	No	Yes

```

usbccgp Microsoft USB Generic Parent Driver
c:\windows\system32\drivers\usbccgp.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

usbhci Microsoft USB 2.0 Enhanced Host Controller
Miniport Driver
c:\windows\system32\drivers\usbhci.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

usbhub USB2 Enabled Hub
c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

usbstor USB Mass Storage Driver
c:\windows\system32\drivers\usbstor.sys
Kernel Driver No Manual
Stopped OK Normal No No

usbuhci Microsoft USB Universal Host Controller
Miniport Driver
c:\windows\system32\drivers\usbuhci.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

vgasave VGA Display Controller.
c:\windows\system32\drivers\vga.sys
Kernel Driver Yes System
Running OK Ignore No Yes

viaide ViaIde Not Available Kernel Driver
No Disabled Stopped OK
Normal No No

volsnap Storage volumes
c:\windows\system32\drivers\volsnap.sys
Kernel Driver Yes Boot
Running OK Normal No Yes

wanarp Remote Access IP ARP Driver
c:\windows\system32\drivers\wanarp.sys
Kernel Driver Yes Manual
Running OK Normal No Yes

wdica WDICA Not Available Kernel Driver
No Manual Stopped OK
Ignore No No

wlbs Network Load Balancing
c:\windows\system32\drivers\wlbs.sys
Kernel Driver No Manual
Stopped OK Normal No No

```

```

Terminal Server Mouse Driver No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ROOT\RDP_MOU\0000

Terminal Server Keyboard Driver No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available ROOT\RDP_KBD\0000

Terminal Server Device Redirector No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available ROOT\RDPDR\0000

Direct Parallel No NET 5.2.3790.0
10/1/2002 Microsoft netrasa.inf Not
Available ROOT\MS_PTMINIPORT\0000

WAN Miniport (PPTP) No NET 5.2.3790.0
10/1/2002 Microsoft netrasa.inf Not
Available ROOT\MS_PPTMINIPORT\0000

WAN Miniport (PPPOE) No NET
5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available
ROOT\MS_PPPOEMINIPORT\0000

WAN Miniport (IP) No NET 5.2.3790.0
10/1/2002 Microsoft netrasa.inf Not
Available ROOT\MS_NDISWANIP\0000

WAN Miniport (L2TP) No NET 5.2.3790.0
10/1/2002 Microsoft netrasa.inf Not
Available ROOT\MS_L2TPMINIPORT\0000

Video Codecs No MEDIA 5.2.3790.0
10/1/2002 (Standard system devices)
wave.inf Not Available
ROOT\MEDIA\MS_MMVID

Legacy Video Capture Devices No MEDIA
5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available
ROOT\MEDIA\MS_MMVCD

Media Control Devices No MEDIA
5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available
ROOT\MEDIA\MS_MMMCI

Legacy Audio Drivers No MEDIA
5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available
ROOT\MEDIA\MS_MMDRV

Audio Codecs No MEDIA 5.2.3790.0
10/1/2002 (Standard system devices)
wave.inf Not Available
ROOT\MEDIA\MS_MMACM

Remote Access IP ARP Driver Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_WANARP\0000

volsnap Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available ROOT\LEGACY_VOLSNAP\0000

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PCIId Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_PCIIDE\0000

Partition Manager Not Available LEGACYDRIVER
Not Available Not Available Not
Available Not Available Not Available
ROOT\LEGACY_PARTMGR\0000

Null Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_NULL\0000

NetBios over Tcpip Not Available LEGACYDRIVER
Not Available Not Available Not
Available Not Available Not Available
ROOT\LEGACY_NETBT\0000

NDProxy Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_NDPROXY\0000

NDIS Usermode I/O Protocol Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_NDISUIO\0000

Remote Access NDIS TAPI Driver Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_NDIS_TAPI\0000

NDIS System Driver Not Available LEGACYDRIVER
Not Available Not Available Not
Available Not Available Not Available
ROOT\LEGACY_NDIS\0000

mountmgr Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_MOUNTMGR\0000

mmdd Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_MMDD\0000

ksecdd Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_KSECDD\0000

IPSEC driver Not Available LEGACYDRIVER
Not Available Not Available Not
Available Not Available Not Available
ROOT\LEGACY_IPSEC\0000

Generic Packet Classifier Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_GPC\0000

Fips Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_FIPS\0000

dmload Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_DMLOAD\0000

dmboot Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_DMBOOT\0000

CRC Disk Filter Driver Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_CRCDISK\0000

Beep Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_BEEP\0000

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[Signed Drivers]

```

Device Name Signed Device Class
Driver Version Driver Date
Manufacturer INF Name Driver Name
Device ID
Microsoft System Management BIOS Driver No
SYSTEM 5.2.3790.1830 10/1/2002
(Standard system devices) machine.inf
Not Available ROOT\SYSTEM\0002
Microcode Update Device No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ROOT\SYSTEM\0001
Plug and Play Software Device Enumerator No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available ROOT\SYSTEM\0000

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VGA Display Controller. Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_VGASAVE\0000

TCP/IP Protocol Driver Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_TCPIP\0000

RDPCDD Not Available LEGACYDRIVER Not
Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_RDPCDD\0000

Remote Access Auto Connection Driver Not Available
LEGACYDRIVER Not Available Not
Available Not Available Not Available Not
Available ROOT\LEGACY_RASACD\0000

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AFD Networking Support Environment      Not Available
LEGACYDRIVER                          Not Available
Available Not Available                 Not Available
Available ROOT\LEGACY_AFD\0000
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE96721D0C
OFFSET7E00LENGT3D093B0000
Generic volume No                       VOLUME 5.2.3790.0
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE9B35433F
OFFSET7E00LENGT888BF5E00
Generic volume No                       VOLUME 5.2.3790.0
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREC770C760
FFSET7E00LENGT888BF5E00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREBB5A9A79
OFFSET1D4C900600LENGT35027C400
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREBB5A9A79
OFFSET9C459D800LENGT1388362E00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREBB5A9A79
OFFSET7E00LENGT9C4595A00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C397
OFFSET1D4C900600LENGT35027C400
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C397
OFFSET9C459D800LENGT1388362E00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C397
OFFSET7E00LENGT9C4595A00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8B314FBF
OFFSET1D4C900600LENGT35027C400
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8B314FBF
OFFSET9C459D800LENGT1388362E00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8B314FBF
OFFSET7E00LENGT9C4595A00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C396
OFFSET1D4C900600LENGT35027C400
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available

```

```

STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C396
OFFSET9C459D800LENGT1388362E00
Generic volume No                       VOLUME 5.2.3790.1830
10/1/2002 Microsoft volume.inf        Not
Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURED911C396
OFFSET7E00LENGT9C4595A00
Volume Manager No                       SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices)
machine.inf Not Available
ROOT\FDISK\0000
Logical Disk Manager No                 SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ROOT\DMIO\0000
ACPI Fixed Feature Button No            SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ACPI\FIXEDBUTTON\2&DABA3FF&0
Intel(R) 82801EB SMBus Controller - 24D3 No
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_24D3&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&FB
Secondary IDE Channel No                HDC
5.2.3790.0 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
PCI\IDE\IDECCHANNEL\4&6EDE9F8&0&1
CD-ROM Drive No                         CDROM 5.2.3790.0
10/1/2002 (Standard CD-ROM drives)
cdrom.inf Not Available
IDE\CDROMQSI_DVD-ROM_SDR-
083_____MX13_____5&6FEE0D8&0&0.0.0
Primary IDE Channel No                  HDC 5.2.3790.0
10/1/2002 (Standard IDE ATA/ATAPI
controllers) mshdc.inf Not Available
PCI\IDE\IDECCHANNEL\4&6EDE9F8&0&0
Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1
No HDC 5.2.3790.1830
10/1/2002 Intel mshdc.inf Not Available
PCI\VEN_8086&DEV_24D1&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&FA
Microsoft ACPI-Compliant Embedded Controller No
SYSTEM 5.2.3790.0 10/1/2002
Microsoft acpi.inf Not Available
ACPI\PNP0C09\4&2745F95E&0
Motherboard resources No               SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ACPI\PNP0C02\2
Communications Port No                  PORTS 5.2.3790.0
10/1/2002 (Standard port types)
msports.inf Not Available
ACPI\PNP0501\2
Communications Port No                  PORTS 5.2.3790.0
10/1/2002 (Standard port types)
msports.inf Not Available
ACPI\PNP0501\1
Motherboard resources No               SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ACPI\PNP0C02\1
Intel(R) 82802 Firmware Hub Device No
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
ACPI\INT0800\4&2745F95E&0
System speaker No                       SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices)
machine.inf Not Available
ACPI\PNP0800\4&2745F95E&0

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System timer No                         SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices)
machine.inf Not Available
ACPI\PNP0100\4&2745F95E&0
Numeric data processor No              SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ACPI\PNP0C04\4&2745F95E&0
Programmable interrupt controller No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available ACPI\PNP0000\4&2745F95E&0
System CMOS/real time clock No         SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ACPI\PNP0B00\4&2745F95E&0
Direct memory access controller No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available ACPI\PNP0200\4&2745F95E&0
ISAPNP Read Data Port No              SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ISAPNP\READDATA\PORT\0
Intel(R) 82801EB LPC Interface Controller - 24D0 No
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_24D0&SUBSYS_00000000&REV_02\
3&1FCE7BBF&0&F8
Default Monitor No                     MONITOR 5.1.2001.0
6/6/2001 (Standard monitor types)
monitor.inf Not Available
DISPLAY\DEFAULT_MONITOR\5&1604DC1B&0&10000000
&1C&00
Default Monitor No                     MONITOR 5.1.2001.0
6/6/2001 (Standard monitor types)
monitor.inf Not Available
DISPLAY\DEFAULT_MONITOR\5&1604DC1B&0&10000001
&1C&00
RADEON 7000 RADEON VE Family (Microsoft Corporation)
No DISPLAY 6.13.10.6153
8/8/2002 ATI Technologies Inc.
atiixpag.inf Not Available
PCI\VEN_1002&DEV_5159&SUBSYS_34498086&REV_00\
4&1FE6A6B6&0&00F0
Intel(R) 82801 PCI Bridge - 244E No
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_C2\
3&1FCE7BBF&0&F0
Generic USB Hub No                     USB 5.2.3790.0
10/1/2002 (Generic USB Hub) usb.inf Not
Available USB\VID_0424&PID_A700\5&11A3801C&0&3
USB Root Hub No                        USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB20\4&14643EC&0
Standard Enhanced PCI to USB Host Controller No
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24DD&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&EF
HID-compliant consumer control device No
HIDCLASS 5.2.3790.0 10/1/2002
Microsoft hidserv.inf Not Available
HID\VID_0A81&PID_0205&MI_01&COL03\7&2845102F&
0&0002
HID-compliant device No                HIDCLASS
5.2.3790.0 10/1/2002 (Standard

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PCI\VEN_8086&DEV_260C&SUBSYS_00000000&REV_10\
3&1FCE7BBF&0&60
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2627&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5F
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2626&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5E
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2625&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5D
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2624&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5C
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2623&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5B
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2622&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&5A
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2621&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&59
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2620&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&58
PCI standard host CPU bridge No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_260C&SUBSYS_00000000&REV_10\
3&1FCE7BBF&0&50
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2627&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4F
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2626&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4E
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2625&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4D
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2624&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4C
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2623&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4B

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PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2622&SUBSYS_34498086&REV_10\
3&1FCE7BBF&0&4A
PCI standard RAM Controller No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2621&SUBSYS_34498086&REV_10\
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PCI standard RAM Controller No SYSTEM
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system devices) machine.inf Not Available
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PCI standard host CPU bridge No SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
PCI\VEN_8086&DEV_260C&SUBSYS_00000000&REV_10\
3&1FCE7BBF&0&40
Disk drive No DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_MEGARAID&PROD_LD_0_MEGARAID&R
EV_7&38F8A196&0&300
RAID Virtual Device No SYSTEM 5.2.3790.1830
10/1/2002 American Megatrends, Inc.
scsidev.inf Not Available
SCSI\OTHER&VEN_RAID&PROD_DUMMYDEVICE&REV_0
000\7&38F8A196&0&2390
Enclosure Services Device No SYSTEM
2.2.1.0 17/2/2004 Adaptec oem1.inf Not
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SCSI\PROCESSOR&VEN_EUROLOGC&PROD_ULTRABLOC&R
V_0017\7&38F8A196&0&0F0
MegaRAID SCSI 320-2X RAID Controller No
SCSIADAPTER 6.45.2.32 8/2/2004 LSI
Logic Corp., oem0.inf Not Available
PCI\VEN_1000&DEV_0407&SUBSYS_05321000&REV_02\
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
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Not Available
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MegaRAID SCSI 320-4X RAID Controller No
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Logic Corp., oem0.inf Not Available
PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\
6&348B5EA3&0&00300238
PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available
PCI\VEN_1014&DEV_01A7&SUBSYS_00000000&REV_02\
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
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5&8AF1E42&0&300238
PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available
PCI\VEN_8086&DEV_0332&SUBSYS_00000000&REV_07\
4&3463CAB2&0&0238
SCA Hotswap Backplane No SYSTEM
5.2.3790.0 10/1/2002 ESG-SHV
scsidev.inf Not Available

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SCSI\PROCESSOR&VEN_ESG-
SHV&PROD_SCA_HSBP_M35&REV_1.06\6&1AFBF607&0&060
LSI Logic PCI-X Ultra320 SCSI Host Adapter No
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10/1/2002 LSI Logic Inc. pnpscsi.inf
Not Available
PCI\VEN_1000&DEV_0030&SUBSYS_34498086&REV_08\
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SCA Hotswap Backplane No SYSTEM
5.2.3790.0 10/1/2002 ESG-SHV
scsidev.inf Not Available
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SHV&PROD_SCA_HSBP_M35&REV_1.06\6&3A113296&0&060
Disk drive No DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_SEAGATE&PROD_ST336753LC&REV_000
3\6&3A113296&0&010
Disk drive No DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
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_JNZH\6&3A113296&0&000
LSI Logic PCI-X Ultra320 SCSI Host Adapter No
SCSIADAPTER 5.2.3790.0
10/1/2002 LSI Logic Inc. pnpscsi.inf
Not Available
PCI\VEN_1000&DEV_0030&SUBSYS_34498086&REV_08\
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
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Broadcom NetXtreme Gigabit Ethernet No NET
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Broadcom NetXtreme Gigabit Ethernet No NET
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PCI\VEN_14E4&DEV_1648&SUBSYS_34498086&REV_10\
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Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A
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scsidev.inf Not Available
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MegaRAID SCSI 320-4X RAID Controller No
SCSIADAPTER 6.45.2.32 8/2/2004 LSI
Logic Corp., oem0.inf Not Available
PCI\VEN_1000&DEV_0407&SUBSYS_05311000&REV_02\
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available

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SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
Not Available
PCI\VEN_8086&DEV_0332&SUBSYS_00000000&REV_07\
4&21B2CC4D&0&0228
Disk drive No DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_MEGARAID&PROD_LD_0_MEGARAID&R
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RAID Virtual Device No SYSTEM 5.2.3790.1830
10/1/2002 American Megatrends, Inc.
scsidev.inf Not Available
SCSI\OTHER&VEN_RAID&PROD_DUMMYDEVICE&REV_0
000\6&C972784&0&2390
Enclosure Services Device No SYSTEM
2.2.1.0 17/2/2004 Adaptec oeml.inf Not
Available
SCSI\PROCESSOR&VEN_EUROLOGC&PROD_ULTRABLOC&RE
V_0017\6&C972784&0&1F0
Enclosure Services Device No SYSTEM
2.2.1.0 17/2/2004 Adaptec oeml.inf Not
Available
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MegaRAID SCSI 320-2E RAID Controller No
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Logic Corp., oem0.inf Not Available
PCI\VEN_1000&DEV_0408&SUBSYS_00021000&REV_07\
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PCI standard PCI-to-PCI bridge No
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(Standard system devices) machine.inf
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Disk drive No DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
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scsidev.inf Not Available

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Logic Corp., oem0.inf Not Available
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
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PCI standard PCI-to-PCI bridge No
SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf
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Disk drive No DISKDRIVE 5.2.3790.0
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disk.inf Not Available
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Logic Corp., oem0.inf Not Available
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Disk drive No DISKDRIVE 5.2.3790.0
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MegaRAID SCSI 320-2E RAID Controller No
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Logic Corp., oem0.inf Not Available
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machine.inf Not Available
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Intel Processor No PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4_3
Intel Processor No PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4_2
Intel Processor No PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
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Intel Processor No PROCESSOR 5.2.3790.1830
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Microsoft ACPI-Compliant System No
SYSTEM 5.2.3790.0 10/1/2002
Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC No COMPUTER
5.2.3790.0 10/1/2002 (Standard
computers) hal.inf Not Available
ROOT\ACPI_HAL\0000
Not Available Not Available Not Available
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[Environment Variables]

Variable Value User Name
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Path %SystemRoot%\system32;%SystemRoot%;%SystemRo
t%\System32\Wbem;C:\Program Files\Microsoft SQL
Server\80\Tools\Binn\C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\C:\Program Files\Microsoft SQL
Server\90\DTS\Binn\C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\
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PROCESSOR_IDENTIFIER x86 Family 15 Model 4
Stepping 8, GenuineIntel <SYSTEM>
PROCESSOR_REVISION 0408 <SYSTEM>
NUMBER_OF_PROCESSORS 4 <SYSTEM>
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<SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.
WSH <SYSTEM>
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TMP %SystemRoot%\TEMP <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\LOCAL SERVICE
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AUTHORITY\NETWORK SERVICE
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AUTHORITY\NETWORK SERVICE
TEMP %USERPROFILE%\Local Settings\Temp
NOCONA_QUAD\Administrator
TMP %USERPROFILE%\Local Settings\Temp
NOCONA_QUAD\Administrator

[Print Jobs]

Document Size Owner Notify Status Time
Submitted Start Time Until Time
Elapsed Time Pages Printed Job
ID Priority Parameters Driver Print
Processor Host Print Queue Data Type Name

[Network Connections]

Local Name Remote Name Type
Status User Name

[Running Tasks]

Name Path Process ID Priority Min
Working Set Max Working Set Start Time
Version Size File Date
system idle process Not Available 0 0
Not Available Not Available Not
Available Not Available Not Available
system Not Available 4 8 0
1413120 Not Available Not Available
Not Available Not Available
smss.exe Not Available 356 11
204800 1413120 23/3/2006 11:13 Not
Available Not Available Not Available
csrss.exe Not Available 592 13 Not
Available Not Available 23/3/2006 11:13 Not
Available Not Available Not Available
winlogon.exe c:\windows\system32\winlogon.exe
632 13 204800 1413120
23/3/2006 11:13 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 497,00 KB (508.928 bytes)
25/1/2006 12:00
services.exe c:\windows\system32\services.exe
684 9 204800 1413120
23/3/2006 11:13 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 107,50 KB (110.080 bytes)
25/3/2003 09:00
lsass.exe c:\windows\system32\lsass.exe 704 9
204800 1413120 23/3/2006 11:13
5.2.3790.0 (srv03_rtm.030324-2048) 13,00
KB (13.312 bytes) 25/3/2003 09:00
svchost.exe c:\windows\system32\svchost.exe
872 8 204800 1413120
23/3/2006 11:13 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14,00 KB (14.336 bytes)
25/1/2006 12:00
svchost.exe Not Available 968 8
Not Available Not Available
23/3/2006 11:13 Not Available Not
Available Not Available
svchost.exe Not Available 1032 8
Not Available Not Available
23/3/2006 11:13 Not Available Not
svchost.exe c:\windows\system32\svchost.exe
1064 8 204800 1413120
23/3/2006 11:13 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14,00 KB (14.336 bytes)
25/1/2006 12:00
locator.exe Not Available 1216 8
Not Available Not Available
23/3/2006 11:13 Not Available Not
Available Not Available
wmiprvse.exe Not Available 588 8
Not Available Not Available
23/3/2006 11:14 Not Available Not
Available Not Available
explorer.exe c:\windows\explorer.exe 1204
8 204800 1413120 23/3/2006 11:14
6.00.3790.1830 (srv03_spl_rtm.050324-1447)
1,00 MB (1.050.624 bytes) 25/1/2006 12:01
taskmgr.exe c:\windows\system32\taskmgr.exe
980 13 204800 1413120
23/3/2006 18:12 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 164,50 KB (168.448 bytes)
25/1/2006 12:00
cmd.exe c:\windows\system32\cmd.exe 1496 8
204800 1413120 23/3/2006 18:32
5.2.3790.1830 (srv03_spl_rtm.050324-1447)

379,00 KB (388.096 bytes) 25/3/2003 09:00

sqlservr.exe c:\program files\microsoft sql
server\mssql.1\mssql\bin\sqlservr.exe 964 13
204800 1413120 23/3/2006 18:32
2005.090.1399.00 27,44 MB (28.768.528
bytes) 14/10/2005 03:51
mmc.exe c:\windows\system32\mmc.exe 1072 8
204800 1413120 30/3/2006 14:08
5.2.3790.1830 (srv03_spl_rtm.050324-1447)
829,00 KB (848.896 bytes) 25/1/2006 12:00
helpctr.exe
c:\windows\pchealth\helpctr\binaries\helpctr.
exe 772 8 204800 1413120
30/3/2006 14:09 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 778,00 KB (796.672 bytes)
25/1/2006 12:01
wmiprvse.exe Not Available 1420 8
Not Available Not Available
30/3/2006 14:09 Not Available Not
Available Not Available
helpsvc.exe
c:\windows\pchealth\helpctr\binaries\helpsvc.
exe 1800 8 204800 1413120
30/3/2006 14:09 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 745,00 KB (762.880 bytes)
25/1/2006 12:01

[Loaded Modules]

Name Version Size File Date Manufacturer
Path
winlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
497,00 KB (508.928 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
748,50 KB (766.464 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\ntdll.dll
kernel32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.014,00 KB (1.038.336 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\kernel32.dll
advapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
605,50 KB (620.032 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
627,00 KB (642.048 bytes) 25/1/2006 12:00
Microsoft Corporation
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crypt32 5.131.3790.1830 (srv03_spl_rtm.050324-1447)
582,00 KB (595.968 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\crypt32.dll
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56,50 KB (57.856 bytes) 25/1/2006 12:00
Microsoft Corporation
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msvcrt 7.0.3790.1830 (srv03_spl_rtm.050324-1447)
340,50 KB (348.672 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
574,50 KB (588.288 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
273,00 KB (279.552 bytes) 25/1/2006 12:01

Microsoft Corporation
 c:\windows\system32\gdi32.dll
 nddeapi 5.2.3790.0 (srv03_rtm.030324-2048) 16,00
 KB (16.384 bytes) 25/3/2003 09:00 Microsoft
 Corporation c:\windows\system32\nddeapi.dll

profmap 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 22,50 KB (23.040 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\profmap.dll

netapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 341,50 KB (349.696 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\netapi32.dll

userenv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 771,00 KB (789.504 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\userenv.dll

psapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 20,00 KB (20.480 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\psapi.dll

regapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 55,00 KB (56.320 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\regapi.dll

secur32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 64,00 KB (65.536 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\secur32.dll

setupapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 1,03 MB (1.079.808 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\setupapi.dll

version 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 18,00 KB (18.432 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\version.dll

winsta 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 54,50 KB (55.808 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\winsta.dll

ws2_32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 82,00 KB (83.968 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ws2_32.dll

ws2help 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 19,50 KB (19.968 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ws2help.dll

msgina 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 1,16 MB (1.211.904 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\msgina.dll

shsvcs 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 131,50 KB (134.656 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\shsvcs.dll

shlwapi 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 313,50 KB (321.024 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\shlwapi.dll

sfc 5.2.3790.0 (srv03_rtm.030324-2048) 4,50
 KB (4.608 bytes) 25/3/2003 09:00 Microsoft
 Corporation c:\windows\system32\sfc.dll

sfc_os 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 138,00 KB (141.312 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\sfc_os.dll

wintrust 5.131.3790.1830 (srv03_spl_rtm.050324-1447)
 162,00 KB (165.888 bytes) 25/1/2006 12:00

Microsoft Corporation
 c:\windows\system32\wintrust.dll

imagehlp 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 145,50 KB (148.992 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\imagehlp.dll

ole32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 1,19 MB (1.245.184 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ole32.dll

comctl32 6.0 (srv03_spl_rtm.050324-1447) 1,00
 MB (1.051.136 bytes) 24/3/2005 21:41
 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.windows.common-
 n-controls_6595b64144ccf1df_6.0.3790.1830_x-
 ww_7ae38ccf\comctl32.dll

winscard 5.2.3790.0 (srv03_rtm.030324-2048) 98,50
 KB (100.864 bytes) 25/3/2003 09:00 Microsoft
 Corporation c:\windows\system32\winscard.dll

wtsapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 19,00 KB (19.456 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\wtsapi32.dll

winmm 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 172,50 KB (176.640 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\winmm.dll

sxs 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 743,50 KB (761.344 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\sxs.dll

shell32 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 7,99 MB (8.379.392 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\shell32.dll

wldap32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 174,50 KB (178.688 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\wldap32.dll

csccdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 100,00 KB (102.400 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\csccdll.dll

dimsntfy 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 19,00 KB (19.456 bytes) 25/1/2006 12:02
 Microsoft Corporation
 c:\windows\system32\dimsntfy.dll

wlnotify 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 94,50 KB (96.768 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\wlnotify.dll

mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56,00
 KB (57.344 bytes) 25/3/2003 09:00 Microsoft
 Corporation c:\windows\system32\mpr.dll

oleaut32 5.2.3790.1830 543,00 KB (556.032 bytes)
 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\oleaut32.dll

winspool 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 147,00 KB (150.528 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\winspool.drv

rsaenh 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 183,98 KB (188.392 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\rsaenh.dll

comctl32 5.82 (srv03_spl_rtm.050324-1447)
 585,00 KB (599.040 bytes) 24/3/2005 21:41
 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.windows.common-
 n-controls_6595b64144ccf1df_5.82.3790.1830_x-
 ww_lb6f474a\comctl32.dll

uxtheme 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 202,00 KB (206.848 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\uxtheme.dll

samlib 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 46,50 KB (47.616 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\samlib.dll

csoui 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 319,50 KB (327.168 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\csoui.dll

ntmarta 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 120,50 KB (123.392 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ntmarta.dll

clbcatq 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 502,50 KB (514.560 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\clbcatq.dll

comres 2001.12.4720.0 (srv03_spl_rtm.030324-2048)
 778,00 KB (796.672 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\comres.dll

xpsp2res 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 2,76 MB (2.897.920 bytes) 25/1/2006 12:02
 Microsoft Corporation
 c:\windows\system32\xpsp2res.dll

wbemprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 20,50 KB (20.992 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\wbem\wbemprox.dll

wbemcomn 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 221,00 KB (226.304 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\wbem\wbemcomn.dll

wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42,50
 KB (43.520 bytes) 24/1/2006 18:33 Microsoft
 Corporation
 c:\windows\system32\wbem\wbemsvc.dll

fastprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 471,00 KB (482.304 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\wbem\fastprox.dll

msvcpx60 6.05.2144.0 388,00 KB (397.312 bytes)
 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\msvcpx60.dll

ntdsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 71,00 KB (72.704 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ntdsapi.dll

dnsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 153,50 KB (157.184 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\dnsapi.dll

services 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 107,50 KB (110.080 bytes) 25/3/2003 09:00
 Microsoft Corporation
 c:\windows\system32\services.exe

ncobjapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 36,00 KB (36.864 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\ncobjapi.dll

scesrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 327,00 KB (334.848 bytes) 25/1/2006 12:00
 Microsoft Corporation
 c:\windows\system32\scesrv.dll

authz 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 66,50 KB (68.096 bytes) 25/1/2006 12:01
 Microsoft Corporation
 c:\windows\system32\authz.dll

umpnmgmr 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
126,50 KB (129.536 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\umpnmgmr.dll

eventlog 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
67,50 KB (69.120 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\eventlog.dll

lsass 5.2.3790.0 (srv03_rtm.030324-2048) 13,00
KB (13.312 bytes) 25/3/2003 09:00 Microsoft
Corporation c:\windows\system32\lsass.exe

lsasrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
803,00 KB (822.272 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\lsasrv.dll

samsrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
450,50 KB (461.312 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\samsrv.dll

cryptdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
32,00 KB (32.768 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\cryptdll.dll

msprvs 5.2.3790.0 (srv03_rtm.030324-2048) 46,50
KB (47.616 bytes) 25/3/2003 09:00 Microsoft
Corporation c:\windows\system32\msprvs.dll

kerberos 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
340,50 KB (348.672 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\kerberos.dll

msvl_0 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
141,00 KB (144.384 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\msvl_0.dll

iphlpapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
92,50 KB (94.720 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\iphlpapi.dll

netlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
409,50 KB (419.328 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\netlogon.dll

w32time 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
222,00 KB (227.328 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\w32time.dll

schannel 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
141,00 KB (144.384 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\schannel.dll

wdigest 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
74,00 KB (75.776 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\wdigest.dll

rassfm 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
23,00 KB (23.552 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\rassfm.dll

kdccvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
213,50 KB (218.624 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\kdccvc.dll

ntdsa 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1,45 MB (1.516.032 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\ntdsa.dll

esent 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.022,50 KB (1.047.040 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\esent.dll

ntdsatq 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
29,50 KB (30.208 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\ntdsatq.dll

mswsock 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
250,50 KB (256.512 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\mswsock.dll

scecli 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
186,50 KB (190.976 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\scecli.dll

ws03res 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
793,50 KB (812.544 bytes) 25/1/2006 12:02
Microsoft Corporation
c:\windows\system32\ws03res.dll

hnetcfg 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
343,50 KB (351.744 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\hnetcfg.dll

wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 18,00
KB (18.432 bytes) 25/3/2003 09:00 Microsoft
Corporation c:\windows\system32\wshtcpip.dll

dssenh 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
139,98 KB (143.336 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\dssenh.dll

svchost 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
14,00 KB (14.336 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\svchost.exe

rpcss 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
406,00 KB (415.744 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\rpcss.dll

wkssvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
130,00 KB (133.120 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\wkssvc.dll

aelupsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
26,00 KB (26.624 bytes) 25/1/2006 12:02
Microsoft Corporation
c:\windows\system32\aelupsvc.dll

apphelp 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
146,50 KB (150.016 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\apphelp.dll

dmserver 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
25,50 KB (26.112 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\dmserver.dll

es 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
233,00 KB (238.592 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\es.dll

wmisvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
140,00 KB (143.360 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\wmisvc.dll

vssapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
548,00 KB (561.152 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\vssapi.dll

atl 3.05.2283 83,00 KB (84.992 bytes)
25/3/2003 09:00 Microsoft Corporation
c:\windows\system32\atl.dll

comsvcs 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
1,19 MB (1.248.256 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\comsvcs.dll

wbemcore 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
497,50 KB (509.440 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll

esscli 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
250,00 KB (256.000 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\esscli.dll

wmiutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
93,50 KB (95.744 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll

repdrvfs 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
172,50 KB (176.640 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll

wmiprvsd 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
404,00 KB (413.696 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll

wbemess 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
271,50 KB (278.016 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll

ncprov 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
46,50 KB (47.616 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll

wiarpc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
32,50 KB (33.280 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\wiarpc.dll

netman 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
258,50 KB (264.704 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\netman.dll

mprapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
89,00 KB (91.136 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\mprapi.dll

activeds 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
194,00 KB (198.656 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\activeds.dll

adslrpc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
146,00 KB (149.504 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\adslrpc.dll

credui 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
162,00 KB (165.888 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\credui.dll

rtutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
34,50 KB (35.328 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\rtutils.dll

netshell 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1,73 MB (1.812.992 bytes) 25/1/2006 12:00
Microsoft Corporation
c:\windows\system32\netshell.dll

clusapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
60,00 KB (61.440 bytes) 25/1/2006 12:01
Microsoft Corporation
c:\windows\system32\clusapi.dll

rasapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
239,50 KB (245.248 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\rasapi32.dll

rasman 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
61,50 KB (62.976 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\rasman.dll

tapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 179,50 KB (183.808 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\tapi32.dll
 wininet 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 646,00 KB (661.504 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\wininet.dll
 wzcsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 41,00 KB (41.984 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\wzcsapi.dll
 wzcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 364,50 KB (373.248 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\wzcsvc.dll
 wmi 5.2.3790.0 (srv03_rtm.030324-2048) 6,50 KB (6.656 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\wmi.dll
 dhcpcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 113,50 KB (116.224 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\dhcpcsvc.dll
 rasdlg 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 663,00 KB (678.912 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\rasdlg.dll
 rasadhlp 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 7,50 KB (7.680 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\rasadhlp.dll
 netcfgx 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 763,00 KB (781.312 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\netcfgx.dll
 winipsec 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 35,50 KB (36.352 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\winipsec.dll
 wbemcons 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 45,50 KB (46.592 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\system32\wbem\wbemcons.dll
 pchsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 39,00 KB (39.936 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\pchsvc.d
 ll explorer 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1,00 MB (1.050.624 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\explorer.exe
 browseui 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1.009,00 KB (1.033.216 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\system32\browseui.dll
 shdocvw 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1,43 MB (1.502.720 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\shdocvw.dll
 cryptui 5.131.3790.1830 (srv03_spl_rtm.050324-1447) 496,50 KB (508.416 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\system32\cryptui.dll
 themeui 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 377,50 KB (386.560 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\themeui.dll
 msimg32 5.2.3790.0 (srv03_rtm.030324-2048) 4,50 KB (4.608 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\msimg32.dll

linkinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19,00 KB (19.456 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\linkinfo.dll
 ntshruil 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 140,00 KB (143.360 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\ntshruil.dll
 webcheck 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 272,50 KB (279.040 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\webcheck.dll
 wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22,00 KB (22.528 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\wsock32.dll
 stobject 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 120,50 KB (123.392 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\stobject.dll
 batmeter 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 31,50 KB (32.256 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\system32\batmeter.dll
 powrprof 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 16,50 KB (16.896 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\powrprof.dll
 urlmon 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 673,00 KB (689.152 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\urlmon.dll
 drprov 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 14,00 KB (14.336 bytes) 25/1/2006 12:01 Microsoft Corporation
 c:\windows\system32\drprov.dll
 ntlanman 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 43,50 KB (44.544 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\ntlanman.dll
 netui0 5.2.3790.0 (srv03_rtm.030324-2048) 75,50 KB (77.312 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\netui0.dll
 netui1 5.2.3790.0 (srv03_rtm.030324-2048) 184,00 KB (188.416 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\netui1.dll
 davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23,50 KB (24.064 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\davclnt.dll
 browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62,00 KB (63.488 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\browselc.dll
 mlang 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 577,50 KB (591.360 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\mlang.dll
 mydocs 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 90,00 KB (92.160 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\mydocs.dll
 shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588,50 KB (602.624 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\shdoclc.dll
 taskmgr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 164,50 KB (168.448 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\taskmgr.exe

vdmdbg 5.2.3790.0 (srv03_rtm.030324-2048) 25,00 KB (25.600 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\vdmdbg.dll
 cmd 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 379,00 KB (388.096 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\cmd.exe
 sqlservr 2005.090.1399.00 27,44 MB (28.768.528 bytes) 14/10/2005 03:51 Microsoft Corporation
 c:\program files\microsoft sql server\mssql.1\mssql\bin\sqlservr.exe
 msvcr80 8.00.50727.42 612,00 KB (626.688 bytes) 23/9/2005 07:29 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.vc80.crt_lfc8b3b9a1e18e3b_8.0.50727.42_x-ww_0de06acd\msvcr80.dll
 msvcp80 8.00.50727.42 536,00 KB (548.864 bytes) 23/9/2005 07:29 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.vc80.crt_lfc8b3b9a1e18e3b_8.0.50727.42_x-ww_0de06acd\msvcp80.dll
 opens60 2005.090.1399.00 20,71 KB (21.208 bytes) 14/10/2005 03:45 Microsoft Corporation
 c:\program files\microsoft sql server\mssql.1\mssql\bin\opens60.dll
 instapi 2005.090.1399.00 34,21 KB (35.032 bytes) 14/10/2005 03:37 Microsoft Corporation
 c:\program files\microsoft sql server\90\shared\instapi.dll
 sqllevn70 2005.090.1399.00 1,57 MB (1.642.200 bytes) 14/10/2005 03:49 Microsoft Corporation
 c:\program files\microsoft sql server\mssql.1\mssql\bin\resources\1033\sqllevn70.rll
 sqlos 2005.090.1399.00 15,21 KB (15.576 bytes) 14/10/2005 03:49 Microsoft Corporation
 c:\program files\microsoft sql server\mssql.1\mssql\bin\sqlos.dll
 mscoree 2.0.50727.42 (RTM.050727-4200) 264,50 KB (270.848 bytes) 23/9/2005 07:28 Microsoft Corporation
 c:\windows\system32\mscoree.dll
 xolehlp 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 10,50 KB (10.752 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\xolehlp.dll
 msdtcprx 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 455,50 KB (466.432 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\msdtcprx.dll
 mtxcclu 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 77,00 KB (78.848 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\mtxcclu.dll
 resutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 63,50 KB (65.024 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\resutils.dll
 winrnr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 17,00 KB (17.408 bytes) 25/1/2006 12:00 Microsoft Corporation
 c:\windows\system32\winrnr.dll
 security 5.2.3790.0 (srv03_rtm.030324-2048) 5,50 KB (5.632 bytes) 25/3/2003 09:00 Microsoft Corporation
 c:\windows\system32\security.dll
 msfte 12.0.5626.1 2,32 MB (2.427.600 bytes) 26/8/2005 16:00 Microsoft Corporation
 c:\program files\microsoft sql server\mssql.1\mssql\bin\msfte.dll

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dbghelp 6.5.0003.7 (vbl_core_fbrel(jshay).050527-1915) 1,021,21 KB (1,045,720 bytes) 14/10/2005 03:33 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\dbghelp.dll
sqlncli 2005.090.1399.00 2,11 MB (2,208,016 bytes) 14/10/2005 03:51 Microsoft Corporation c:\windows\system32\sqlncli.dll
comdlg32 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 274,50 KB (281,088 bytes) 25/3/2003 09:00 Microsoft Corporation c:\windows\system32\comdlg32.dll
sqlnclir 2005.090.1399.00 200,71 KB (205,528 bytes) 14/10/2005 03:48 Microsoft Corporation c:\windows\system32\sqlnclir.rll
xpstar90 2005.090.1399.00 270,71 KB (277,208 bytes) 14/10/2005 03:54 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\xpstar90.dll
sqlscm90 2005.090.1399.00 29,21 KB (29,912 bytes) 14/10/2005 03:50 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\sqlscm90.dll
odbc32 3.526.1830.0 (srv03_spl_rtm.050324-1447) 240,00 KB (245,760 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\odbc32.dll
batchparser90 2005.090.1399.00 116,21 KB (119,000 bytes) 14/10/2005 03:32 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\batchparser90.dll
sqlsvcs90 2005.090.1399.00 102,21 KB (104,664 bytes) 14/10/2005 03:53 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\sqlsvcs90.dll
SqlResourceLoader 2005.090.1399.00 17,21 KB (17,624 bytes) 14/10/2005 03:49 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\sqlresource\loader.dll
atl80 8.00.50727.42 93,50 KB (95,744 bytes) 22/9/2005 23:49 Microsoft Corporation c:\windows\winsxs\x86_microsoft_vc80_atl_lfc8_b3b9ale18e3b_8_0_50727_42_x-ww_6e805841\atl80.dll
odbcint 3.526.1830.0 (srv03_spl_rtm.050324-1447) 92,00 KB (94,208 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\odbcint.dll
sqlsvcs90 2005.090.1399.00 9,21 KB (9,432 bytes) 14/10/2005 03:46 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\resources\1033\sqlsvcs90.rll
xpstar90 2005.090.1399.00 148,71 KB (152,280 bytes) 14/10/2005 03:48 Microsoft Corporation c:\program files\microsoft sql server\mssql.1\mssql\bin\resources\1033\xpstar90.rll
mmc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 829,00 KB (848,896 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mmc.exe
mfc42u 6.06.8063.0 1,11 MB (1,163,776 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mfc42u.dll
mmcbase 5.2.3790.0 (srv03_rtm.030324-2048) 70,50 KB (72,192 bytes) 25/3/2003 09:00 Microsoft Corporation c:\windows\system32\mmcbase.dll
oleacc 4.2.5406.0 (srv03_rtm.030324-2048) 171,00 KB (175,104 bytes) 25/3/2003 09:00 Microsoft Corporation c:\windows\system32\oleacc.dll

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mmcmdmgr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1,17 MB (1,229,824 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mmcmdmgr.dll
msxml3 8.70.1104.0 1,06 MB (1,107,456 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\msxml3.dll
filemgmt 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 335,50 KB (343,552 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\system32\filemgmt.dll
cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 17,50 KB (17,920 bytes) 25/3/2003 09:00 Microsoft Corporation c:\windows\system32\cfgmgr32.dll
mshtml 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 2,96 MB (3,108,864 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142,00 KB (145,408 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 156,00 KB (159,744 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\msimtf.dll
mactf 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 311,00 KB (318,464 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mactf.dll
jscript 5.6.0.8827 448,00 KB (458,752 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\jscript.dll
imm32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 108,00 KB (110,592 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\system32\imm32.dll
mshtml 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 454,50 KB (465,408 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mshtml.dll
snmpsnap 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 182,50 KB (186,880 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\snmpsnap.dll
servdeps 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 56,00 KB (57,344 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\servdeps.dll
mmfutil 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 17,50 KB (17,920 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\mmfutil.dll
helpctr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 778,00 KB (796,672 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6,50 KB (6,656 bytes) 24/1/2006 18:37 Microsoft Corporation c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 133,50 KB (136,704 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\itss.dll
pchshell 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 104,50 KB (107,008 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\pchealth\helpctr\binaries\pchshell.dll

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vbscript 5.6.0.8827 392,00 KB (401,408 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 376,00 KB (385,024 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\pchealth\helpctr\binaries\msinfo.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3,50 KB (3,584 bytes) 25/3/2003 09:00 Microsoft Corporation c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439,00 KB (449,536 bytes) 25/1/2006 12:00 Microsoft Corporation c:\windows\system32\riched20.dll
helpsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 745,00 KB (762,880 bytes) 25/1/2006 12:01 Microsoft Corporation c:\windows\pchealth\helpctr\binaries\helpsvc.exe
[Services]
Display Name Name State Start Mode
Service Type Path Error Control
Start Name Tag ID
Application Experience Lookup Service AeLookupSvc
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Alerter Alerter Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService 0
Application Layer Gateway Service ALG
Stopped Manual Own Process
c:\windows\system32\alg.exe Normal NT
AUTHORITY\LocalService 0
Application Management AppMgmt Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
ASP.NET State Service aspnet_state
Stopped Manual Own Process
c:\windows\microsoft.net\framework\v2.0.50727
\aspnet_state.exe Normal NT
AUTHORITY\NetworkService 0
Windows Audio AudioSrv Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Background Intelligent Transfer Service BITS
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Computer Browser Browser Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Indexing Service CsiSvc Stopped Disabled Share
Process c:\windows\system32\cisvc.exe Normal
LocalSystem 0
ClipBook ClipSrv Stopped Disabled Own Process
c:\windows\system32\clipsrv.exe
Normal LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_X86
clr_optimization_v2.0.50727_32
Stopped Manual Own Process
c:\windows\microsoft.net\framework\v2.0.50727
\mscorsvw.exe Ignore LocalSystem 0
COM+ System Application COMSysApp Stopped
Manual Own Process
c:\windows\system32\dllhost.exe

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```

/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}
Normal LocalSystem 0
Cryptographic Services CryptSvc Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DCOM Server Process Launcher DcomLaunch
Running Auto Share Process
c:\windows\system32\svchost.exe -k dcomlaunch
Normal LocalSystem 0
Distributed File System Dfs Stopped
Manual Own Process
c:\windows\system32\dfsrv.exe
Normal LocalSystem 0
DHCP Client Dhcp Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service
dmdadmin Stopped Manual Share Process
c:\windows\system32\dmdadmin.exe /com
Normal LocalSystem 0
Logical Disk Manager dmserver Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DNS Client Dnscache Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k winerr
Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
c:\windows\system32\services.exe
Normal LocalSystem 0
COM+ Event System EventSystem Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Mylex Global Array Manager Server gamscm
Stopped Manual Own Process
system32\gamserv\gamscm.exe Normal
LocalSystem 0
Help and Support helpsvc Running Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HID Input Service HidServ Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HTTP SSL HTTPFilter Stopped Manual Share
Process c:\windows\system32\lsass.exe Normal
LocalSystem 0
IMAPI CD-Burning COM Service ImapiService
Stopped Disabled Own Process
c:\windows\system32\imapi.exe Normal
LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own
Process c:\windows\system32\ismserv.exe
Normal LocalSystem 0
Kerberos Key Distribution Center kdc
Stopped Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Server lanmanserver Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Workstation lanmanworkstation Running
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

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License Logging LicenseService Stopped
Disabled Own Process
c:\windows\system32\lssrv.exe
Normal NT AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper LmHosts Running Auto
Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Messenger Messenger Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
NetMeeting Remote Desktop Sharing mmshvc
Stopped Disabled Own Process
c:\windows\system32\mmshvc.exe
Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC
Stopped Disabled Own Process
c:\windows\system32\msdtc.exe Normal NT
AUTHORITY\NetworkService 0
SQL Server FullText Search (MSSQLSERVER)
msftesql Stopped Manual Own Process
"c:\program files\microsoft sql
server\mssql.1\mssql\bin\msftesql.exe" -s:mssql.1 -
f:mssqlserver Normal LocalSystem 0
Windows Installer MSIServer Stopped Manual Share
Process c:\windows\system32\msiexec.exe /v
Normal LocalSystem 0
SQL Server (MSSQLSERVER) MSSQLSERVER
Stopped Manual Own Process
"c:\program files\microsoft sql
server\mssql.1\mssql\bin\sqlservr.exe" -smssqlserver
Normal LocalSystem 0
SQL Server Active Directory Helper
MSSQLServerADHelper Stopped Disabled Own
Process "c:\program files\microsoft sql
server\90\shared\sqladhlp90.exe" Normal NT
AUTHORITY\NetworkService 0
Network DDE NetDDE Stopped Disabled Share
Process c:\windows\system32\netdde.exe
Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped
Disabled Share Process
c:\windows\system32\netdde.exe
Normal LocalSystem 0
Net Logon Netlogon Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Network Connections Netman Running Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Location Awareness (NLA) Nla
Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
File Replication NtFrs Stopped Manual Own
Process c:\windows\system32\ntfrs.exe Ignore
LocalSystem 0
NT LM Security Support Provider NtLmSsp
Stopped Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Removable Storage NtmsSvc Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Office Source Engine ose Stopped
Manual Own Process "c:\program
files\common files\microsoft shared\source
engine\ose.exe" Normal LocalSystem 0

```

```

Plug and Play PlugPlay Running Auto Share
Process c:\windows\system32\services.exe
Normal LocalSystem 0
IPSEC Services PolicyAgent Stopped
Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Protected Storage ProtectedStorage Stopped
Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Remote Access Auto Connection Manager RasAuto
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Access Connection Manager RasMan
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Desktop Help Session Manager RDSessMgr
Stopped Manual Own Process
c:\windows\system32\sessmgr.exe
Normal LocalSystem 0
Routing and Remote Access RemoteAccess
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Registry RemoteRegistry Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k regsvc
Normal NT AUTHORITY\LocalService 0
Remote Procedure Call (RPC) Locator RpcLocator
Running Auto Own Process
c:\windows\system32\locator.exe
Normal NT AUTHORITY\NetworkService 0
Remote Procedure Call (RPC) RpcSs Running Auto
Share Process
c:\windows\system32\svchost.exe -k rpcss
Normal NT Authority\NetworkService 0
Resultant Set of Policy Provider RSOPProv
Stopped Manual Share Process
c:\windows\system32\rsopprov.exe
Normal LocalSystem 0
Special Administration Console Helper sacsvr
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Security Accounts Manager SamSs Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Smart Card SCardSvr Stopped Manual Share
Process c:\windows\system32\scardsvr.exe
Ignore NT AUTHORITY\LocalService 0
Task Scheduler Schedule Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Secondary Logon seclogon Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
System Event Notification SENS Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Firewall/Internet Connection Sharing (ICS)
SharedAccess Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

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```

Shell Hardware Detection ShellHWDetection
Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Print Spooler Spooler Stopped Disabled Own
Process c:\windows\system32\spoolsv.exe
Normal LocalSystem 0
SpySer SpySer Stopped Manual Own Process
system32\gamserv\spyser.exe Normal
LocalSystem 0
SQL Server Browser SQLBrowser Stopped
Disabled Own Process "c:\program
files\microsoft sql server\90\shared\sqlbrowser.exe"
Normal LocalSystem 0
SQL Server Agent (MSSQLSERVER) SQLSERVERAGENT
Stopped Manual Own Process
"c:\program files\microsoft sql
server\msql.1\msql\binn\sqlagent90.exe" -i
mssqlserver Normal LocalSystem 0
SQL Server VSS Writer SQLWriter Stopped
Manual Own Process "c:\program
files\microsoft sql server\90\shared\sqlwriter.exe"
Normal LocalSystem 0
Windows Image Acquisition (WIA) stisvc
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k imgsvc
Normal NT AUTHORITY\LocalService 0
Microsoft Software Shadow Copy Provider swprv
Stopped Manual Own Process
c:\windows\system32\svchost.exe -k swprv
Normal LocalSystem 0
Performance Logs and Alerts SysmonLog Stopped Auto
Own Process
c:\windows\system32\smlogsvc.exe
Normal NT Authority\NetworkService 0
Telephony TapiSrv Stopped Manual Share Process
c:\windows\system32\svchost.exe -k tapisrv
Normal LocalSystem 0
Terminal Services TermService Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k termsvcs
Normal LocalSystem 0
Themes Themes Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Telnet TlntSvr Stopped Disabled Own Process
c:\windows\system32\tlntsvr.exe
Normal NT AUTHORITY\LocalService 0
Distributed Link Tracking Server TrkSvr
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Distributed Link Tracking Client TrkWks
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Terminal Services Session Directory Tssdis
Stopped Disabled Own Process
c:\windows\system32\tssdis.exe
Normal LocalSystem 0
Windows User Mode Driver Framework UMWdf
Stopped Manual Own Process
c:\windows\system32\wdfmgmr.exe
Normal NT AUTHORITY\LocalService 0
Upload Manager uploadmgr Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

```

Uninterruptible Power Supply UPS Stopped
Manual Own Process
c:\windows\system32\ups.exe Normal NT
AUTHORITY\LocalService 0
Virtual Disk Service vds Stopped
Manual Own Process
c:\windows\system32\vds.exe Normal
LocalSystem 0
Volume Shadow Copy VSS Stopped Manual Own
Process c:\windows\system32\vssvc.exe Normal
LocalSystem 0
Windows Time W32Time Stopped Manual Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
WinHTTP Web Proxy Auto-Discovery Service
WinHttpAutoProxySvc Stopped Manual Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Windows Management Instrumentation winmgmt
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Portable Media Serial Number Service WmdmPmSN
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Management Instrumentation Driver Extensions
Wmi Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped
Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe
Normal LocalSystem 0
Automatic Updates wuauerv Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Wireless Configuration WZCSVC Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Provisioning Service xmlprov Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

[Program Groups]

```

Group Name Name User Name
Accessories Default User:Accessories
Default User
Accessories\Accessibility Default
User:Accessories\Accessibility Default User
Accessories\Entertainment Default
User:Accessories\Entertainment Default User
Startup Default User:Startup Default User
Accessories All Users:Accessories All
Users
Accessories\Accessibility All
Users:Accessories\Accessibility All Users
Accessories\Communications All
Users:Accessories\Communications All Users

```

```

Accessories\Entertainment All
Users:Accessories\Entertainment All Users
Accessories\System Tools All
Users:Accessories\System Tools All Users
Administrative Tools All Users:Administrative
Tools All Users
Microsoft SQL Server 2005 All Users:Microsoft SQL
Server 2005 All Users
Microsoft SQL Server 2005\Analysis Services All
Users:Microsoft SQL Server 2005\Analysis Services All
Users
Microsoft SQL Server 2005\Configuration Tools All
Users:Microsoft SQL Server 2005\Configuration Tools
All Users
Microsoft SQL Server 2005\Performance Tools All
Users:Microsoft SQL Server 2005\Performance Tools All
Users
Startup All Users:Startup All Users
Accessories NT AUTHORITY\SYSTEM:Accessories
NT AUTHORITY\SYSTEM
Accessories\Accessibility NT
AUTHORITY\SYSTEM:Accessories\Accessibility NT
AUTHORITY\SYSTEM
Accessories\Entertainment NT
AUTHORITY\SYSTEM:Accessories\Entertainment NT
AUTHORITY\SYSTEM
Startup NT AUTHORITY\SYSTEM:Startup NT
AUTHORITY\SYSTEM
Accessories
NOCONA_QUAD\Administrator:Accessories
NOCONA_QUAD\Administrator
Accessories\Accessibility
NOCONA_QUAD\Administrator:Accessories\Accessi
bility NOCONA_QUAD\Administrator
Accessories\Entertainment
NOCONA_QUAD\Administrator:Accessories\Enterta
inment NOCONA_QUAD\Administrator
Administrative Tools
NOCONA_QUAD\Administrator:Administrative
Tools NOCONA_QUAD\Administrator
Startup NOCONA_QUAD\Administrator:Startup
NOCONA_QUAD\Administrator

```

[Startup Programs]

Program	Command	User Name	Location
desktop	desktop.ini		NT AUTHORITY\SYSTEM
desktop	desktop.ini		NOCONA_QUAD\Administrator
desktop	desktop.ini		.DEFAULT Startup
desktop	desktop.ini		All Users Common Startup

[OLE Registration]

Object	Local Server
Sound (OLE2)	sndrec32.exe
Media Clip	mplay32.exe
Video Clip	mplay32.exe /avi
MIDI Sequence	mplay32.exe /mid
Sound	Not Available
Media Clip	Not Available
WordPad Document	"%programfiles%\windows nt\accessories\wordpad.exe"
Windows Media Services DRM Storage object	Not Available
Bitmap Image	mspaint.exe

[Windows Error Reporting]

Time	Type	Details
------	------	---------

[Internet Settings]

[Internet Explorer]

[Following are sub-categories of this main category]
 [Summary]

Item	Value
Version	6.0.3790.1830
Build	62790.1830
Application Path	C:\Program Files\Internet Explorer
Language	English (United States)
Active Printer	Not Available
Cipher Strength	128-bit
Content Advisor	Disabled
IEAK Install	No

[File Versions]

File	Version	Size	Date	Path
actxprxy.dll	6.0.3790.1830	97 KB		
24/3/2005	17:55:26			C:\WINDOWS\system32
Microsoft Corporation				
advpack.dll	6.0.3790.1830	98 KB		
24/3/2005	17:55:28			C:\WINDOWS\system32
Microsoft Corporation				
asctrls.ocx	6.0.3790.0	90 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
browseic.dll	6.0.3790.0	62 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
browseui.dll	6.0.3790.1830	1,009 KB		
24/3/2005	17:56:10			C:\WINDOWS\system32
Microsoft Corporation				
cdfview.dll	6.0.3790.1830	149 KB		
24/3/2005	17:56:32			C:\WINDOWS\system32
Microsoft Corporation				
comctl32.dll	5.82.3790.1830	585 KB		
24/3/2005	17:57:56			C:\WINDOWS\system32
Microsoft Corporation				
dxtrans.dll	6.3.3790.1830	205 KB		
24/3/2005	18:00:58			C:\WINDOWS\system32
Microsoft Corporation				
dxtmsft.dll	6.3.3790.1830	355 KB		
24/3/2005	18:00:58			C:\WINDOWS\system32
Microsoft Corporation				
iecont.dll	<File Missing>	Not Available		
Available	Not Available	Not Available		Not Available
iecontlc.dll	<File Missing>	Not Available		
Available	Not Available	Not Available		Not Available
iedkcs32.dll	16.0.3790.1830	324 KB		
24/3/2005	18:04:58			C:\WINDOWS\system32
Microsoft Corporation				
iepeers.dll	6.0.3790.1830	248 KB		
24/3/2005	18:04:58			C:\WINDOWS\system32
Microsoft Corporation				
iesetup.dll	6.0.3790.1830	61 KB		
24/3/2005	18:04:58			C:\WINDOWS\system32
Microsoft Corporation				
ieuinit.inf	Not Available	24 KB		
Available	24/3/2005	18:04:58		C:\WINDOWS\system32 Not Available

iexplore.exe	6.0.3790.1830	92 KB		
24/3/2005	18:04:58			C:\Program Files\Internet
Microsoft Corporation				
Explorer				
imgutil.dll	6.0.3790.1830	38 KB		
24/3/2005	18:05:04			C:\WINDOWS\system32
Microsoft Corporation				
inetctl.cpl	6.0.3790.1830	358 KB		
24/3/2005	18:05:06			C:\WINDOWS\system32
Microsoft Corporation				
inetctlc.dll	6.0.3790.0	109 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
inseng.dll	6.0.3790.1830	94 KB		
24/3/2005	18:05:06			C:\WINDOWS\system32
Microsoft Corporation				
mlang.dll	6.0.3790.1830	578 KB	24/3/2005	
18:07:20				C:\WINDOWS\system32 Microsoft Corporation
msencode.dll	2002.10.4.0	112 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
mshta.exe	6.0.3790.1830	30 KB	24/3/2005	
18:07:26				C:\WINDOWS\system32 Microsoft Corporation
mshtml.dll	6.0.3790.1830	3,036 KB		
24/3/2005	18:07:26			C:\WINDOWS\system32
Microsoft Corporation				
mshtml.tlb	6.0.3790.1830	1,320 KB		
24/3/2005	18:07:26			C:\WINDOWS\system32
Microsoft Corporation				
mshtml.ed.dll	6.0.3790.1830	455 KB		
24/3/2005	18:07:26			C:\WINDOWS\system32
Microsoft Corporation				
mshtmlr.dll	6.0.3790.1830	56 KB		
24/3/2005	18:07:26			C:\WINDOWS\system32
Microsoft Corporation				
msident.dll	6.0.3790.1830	48 KB		
24/3/2005	18:07:28			C:\WINDOWS\system32
Microsoft Corporation				
msidntld.dll	6.0.3790.0	15 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
msieftp.dll	6.0.3790.1830	244 KB		
24/3/2005	18:07:28			C:\WINDOWS\system32
Microsoft Corporation				
msrating.dll	6.0.3790.1830	144 KB		
24/3/2005	18:07:36			C:\WINDOWS\system32
Microsoft Corporation				
mstime.dll	6.0.3790.1830	523 KB		
24/3/2005	18:07:38			C:\WINDOWS\system32
Microsoft Corporation				
occache.dll	6.0.3790.1830	94 KB		
24/3/2005	18:08:34			C:\WINDOWS\system32
Microsoft Corporation				
proctexe.ocx	6.3.3790.1830	83 KB		
24/3/2005	18:12:26			C:\WINDOWS\system32 Intel Corporation
sendmail.dll	6.0.3790.1830	56 KB		
24/3/2005	18:13:36			C:\WINDOWS\system32
Microsoft Corporation				
shdoclc.dll	6.0.3790.0	589 KB		
25/3/2003	09:00:00			C:\WINDOWS\system32
Microsoft Corporation				
shdocvw.dll	6.0.3790.1830	1,468 KB		
24/3/2005	18:13:36			C:\WINDOWS\system32
Microsoft Corporation				
shfolder.dll	6.0.3790.1830	25 KB		
24/3/2005	18:13:36			C:\WINDOWS\system32
Microsoft Corporation				
shlwapi.dll	6.0.3790.1830	314 KB		
24/3/2005	18:13:40			C:\WINDOWS\system32
Microsoft Corporation				

tdc.ocx	1.3.0.3130	58 KB	25/3/2003	
09:00:00				C:\WINDOWS\system32 Microsoft Corporation
url.dll	6.0.3790.1830	37 KB	24/3/2005	
18:26:12				C:\WINDOWS\system32 Microsoft Corporation

urlmon.dll	6.0.3790.1830	673 KB		
24/3/2005	18:26:12			C:\WINDOWS\system32
Microsoft Corporation				
webcheck.dll	6.0.3790.1830	273 KB		
24/3/2005	18:26:16			C:\WINDOWS\system32
Microsoft Corporation				
wininet.dll	6.0.3790.1830	646 KB		
24/3/2005	18:26:18			C:\WINDOWS\system32
Microsoft Corporation				

[Connectivity]

Item	Value
Connection Preference	Never dial

LAN Settings

AutoConfigProxy	wininet.dll
AutoProxyDetectMode	Disabled
AutoConfigURL	
Proxy	Disabled
ProxyServer	
ProxyOverride	

[Cache]

[Following are sub-categories of this main category]
 [Summary]

Item	Value
Page Refresh Type	Automatic
Temporary Internet Files Folder	C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files
Total Disk Space	Not Available
Available Disk Space	Not Available
Maximum Cache Size	Not Available
Available Cache Size	Not Available

[List of Objects]

Program File	Status	CodeBase
No cached object information available		

[Content]

[Following are sub-categories of this main category]
 [Summary]

Item	Value
Content Advisor	Disabled

[Personal Certificates]

Issued To	Issued By	Validity	Signature Algorithm
No personal certificate information available			

[Other People Certificates]

Issued To	Issued By	Validity	Signature Algorithm
No other people certificate information available			

[Publishers]

Hardware Abstraction Layer Version = "5.2.3790.1830
 (srv03_spl_rtm.050324-1447)"
 User Name CLI05\Administrator
 Time Zone E. South America Standard Time
 Total Physical Memory 1,023.45 MB
 Available Physical Memory 796.93 MB
 Total Virtual Memory 2.42 GB
 Available Virtual Memory 2.29 GB
 Page File Space 1.50 GB
 Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device Status
 I/O Port 0x00000000-0x000000CF7 PCI bus OK
 I/O Port 0x00000000-0x000000CF7 Direct memory access controller OK

IRQ 23 Standard Enhanced PCI to USB Host Controller OK

IRQ 23 Intel(R) PRO/1000 MT Network Connection OK

IRQ 18 Standard Universal PCI to USB Host Controller OK

IRQ 18 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK

Memory Address 0xA0000-0xBFFFF PCI bus OK
 Memory Address 0xA0000-0xBFFFF RAGE XL PCI Family (Microsoft Corporation) OK

[DMA]

Resource Device Status
 Channel 4 Direct memory access controller OK
 Channel 2 Standard floppy disk controller OK

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource Device Status
 0x00000000-0x000000CF7 PCI bus OK
 0x00000000-0x000000CF7 Direct memory access controller OK
 0x00000D00-0x0000FFFF PCI bus OK
 0x0000D000-0x0000D01F Standard Universal PCI to USB Host Controller OK
 0x0000D400-0x0000D41F Standard Universal PCI to USB Host Controller OK
 0x0000D800-0x0000D81F Standard Universal PCI to USB Host Controller OK
 0x0000B800-0x0000B8FF RAGE XL PCI Family (Microsoft Corporation) OK
 0x00003B00-0x00003BBB RAGE XL PCI Family (Microsoft Corporation) OK
 0x00003C00-0x00003DFD RAGE XL PCI Family (Microsoft Corporation) OK
 0x0000BC00-0x0000BC3F Intel(R) PRO/100 S Server Adapter OK
 0x0000B400-0x0000B43F Intel(R) PRO/1000 MT Network Connection OK

0x00000A79-0x00000A79 ISAPNP Read Data Port OK
 0x00000279-0x00000279 ISAPNP Read Data Port OK
 0x00000274-0x00000277 ISAPNP Read Data Port OK
 0x00000020-0x00000021 Programmable interrupt controller OK
 0x000000A0-0x000000A1 Programmable interrupt controller OK
 0x00000081-0x00000083 Direct memory access controller OK
 0x00000087-0x00000087 Direct memory access controller OK
 0x00000089-0x0000008B Direct memory access controller OK
 0x0000008F-0x0000008F Direct memory access controller OK
 0x000000C0-0x000000DF Direct memory access controller OK
 0x00000040-0x00000043 System timer OK
 0x00000070-0x00000071 System CMOS/real time clock OK
 0x00000061-0x00000061 System speaker OK
 0x000000F0-0x000000FF Numeric data processor controller OK
 0x000003F8-0x000003FF Communications Port (COM1) OK
 0x000002F8-0x000002FF Communications Port (COM2) OK
 0x000003F0-0x000003F5 Standard floppy disk controller OK
 0x000003F7-0x000003F7 Standard floppy disk controller OK
 0x00000378-0x0000037F Printer Port (LPT1) OK
 0x00000010-0x0000001F Motherboard resources OK
 0x00000022-0x0000003F Motherboard resources OK
 0x00000044-0x0000005F Motherboard resources OK
 0x00000062-0x00000063 Motherboard resources OK
 0x00000065-0x0000006F Motherboard resources OK
 0x00000072-0x0000007F Motherboard resources OK
 0x00000080-0x00000080 Motherboard resources OK
 0x00000084-0x00000086 Motherboard resources OK
 0x00000088-0x00000088 Motherboard resources OK
 0x0000008C-0x0000008E Motherboard resources OK
 0x00000090-0x0000009F Motherboard resources OK
 0x000000A2-0x000000BF Motherboard resources OK
 0x000000E0-0x000000EF Motherboard resources OK
 0x000004D0-0x000004D1 Motherboard resources OK
 0x00000800-0x0000087F Motherboard resources OK
 0x00000480-0x000004BF Motherboard resources OK
 0x000001F8-0x00000200 Motherboard resources OK

0x00000060-0x00000060 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK
 0x00000064-0x00000064 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK
 0x00000680-0x000006FF Motherboard resources OK
 0x00000295-0x00000296 Motherboard resources OK
 0x0000FC00-0x0000FC0F Intel(R) 82801EB Ultra ATA Storage Controllers - 24DB OK
 0x000001F0-0x000001F7 Primary IDE Channel OK
 0x000003F6-0x000003F6 Primary IDE Channel OK
 0x00000170-0x00000177 Secondary IDE Channel OK
 0x00000376-0x00000376 Secondary IDE Channel OK
 0x0000EC00-0x0000EC07 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 0x0000E800-0x0000E803 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 0x0000E400-0x0000E407 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 0x0000E000-0x0000E003 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 0x0000DC00-0x0000DC0F Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 0x00000400-0x0000041F Intel(R) 82801EB SMBus Controller - 24D3 OK

[IRQs]

Resource Device Status
 IRQ 9 Microsoft ACPI-Compliant System OK
 IRQ 16 Standard Universal PCI to USB Host Controller OK
 IRQ 19 Standard Universal PCI to USB Host Controller OK
 IRQ 18 Standard Universal PCI to USB Host Controller OK
 IRQ 18 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK
 IRQ 23 Standard Enhanced PCI to USB Host Controller OK
 IRQ 23 Intel(R) PRO/1000 MT Network Connection OK
 IRQ 21 RAGE XL PCI Family (Microsoft Corporation) OK
 IRQ 22 Intel(R) PRO/100 S Server Adapter OK
 IRQ 0 System timer OK
 IRQ 8 System CMOS/real time clock OK
 IRQ 13 Numeric data processor OK
 IRQ 4 Communications Port (COM1) OK
 IRQ 3 Communications Port (COM2) OK
 IRQ 6 Standard floppy disk controller OK
 IRQ 1 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK
 IRQ 12 Microsoft PS/2 Mouse OK
 IRQ 14 Primary IDE Channel OK
 IRQ 15 Secondary IDE Channel OK
 IRQ 10 Intel(R) 82801EB SMBus Controller - 24D3 OK

[Memory]

Resource Device Status
 0xA0000-0xBFFFF PCI bus OK


```

OxA0000-0xBFFFF RAGE XL PCI Family (Microsoft
Corporation) OK
0x40000000-0xFFEFFFFFF PCI bus OK
0xFEBFFC00-0xFEBFFFFFF Standard Enhanced PCI to
USB Host Controller OK
0xFD000000-0xFDFFFFFFF RAGE XL PCI Family
(Microsoft Corporation) OK
0xFEAF0000-0xFEAF0000 RAGE XL PCI Family
(Microsoft Corporation) OK
0xFEAF0000-0xFEAF0000 Intel(R) PRO/100 S Server
Adapter OK
0xFEAA0000-0xFEABFFFF Intel(R) PRO/100 S Server
Adapter OK
0xFEAA0000-0xFEAF0000 Intel(R) PRO/1000 MT
Network Connection OK
0xFED20000-0xFED8FFFF Motherboard resources
OK
0xFFB00000-0xFFBFFFFFF Motherboard resources
OK
0xFEC00000-0xFEC00FFF Motherboard resources
OK
0xFEE00000-0xFEE00FFF Motherboard resources
OK
0xFFEFC000-0xFFEFFFFFF Intel(R) 82801EB Ultra
ATA Storage Controllers - 24DB OK
0x0000-0x9FFFF System board OK
0xC0000-0xDFFFF System board OK
0xE0000-0xFFFF System board OK
0x100000-0x3FFFFFFF System board OK
0xFF000000-0xFFFFFFFF System board OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
c:\windows\system32\l3codeca.acm	Fraunhofer Institut Integrierte Schaltungen IIS MPEG Layer-3 Codec	Fraunhofer IIS	OK	C:\WINDOWS\system32\L3CODECA.ACM	1, 9, 284.00 KB (290,816 bytes)	3/25/2003 9:00 AM
c:\windows\system32\sl_anet.acm	Sipro Lab Telecom Inc.	Sipro Lab Telecom Audio Codec	OK	C:\WINDOWS\system32\SL_ANET.ACM	3.02 84.00 KB (86,016 bytes)	3/25/2003 9:00 AM
c:\windows\system32\msaud32.acm	Microsoft Corporation	Windows Media Audio Codec	OK	C:\WINDOWS\system32\MSAUD32.ACM	8.00.00.4487 288.00 KB (294,912 bytes)	3/25/2003 9:00 AM
c:\windows\system32\msadp32.acm	Microsoft Corporation	Microsoft Windows Media Audio Codec	OK	C:\WINDOWS\system32\MSADP32.ACM	5.2.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848 bytes)	3/25/2003 9:00 AM
c:\windows\system32\imaadp32.acm	Microsoft Corporation	Microsoft Windows Media Audio Codec	OK	C:\WINDOWS\system32\IMAADP32.ACM	5.2.3790.0 (srv03_rtm.030324-2048) 15.50 KB (15,872 bytes)	3/25/2003 9:00 AM

```

c:\windows\system32\tssoft32.acm DSP GROUP, INC.
OK
C:\WINDOWS\system32\TSSOFT32.ACM 1.01
9.50 KB (9,728 bytes) 3/25/2003 9:00 AM
AM
c:\windows\system32\msgsm32.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSGSM32.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 20.50
KB (20,992 bytes) 3/25/2003 9:00 AM
c:\windows\system32\msg723.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSG723.ACM
5.2.3790.1830 120.00 KB (122,880 bytes)
2/16/2006 6:44 PM
c:\windows\system32\msg711.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSG711.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 10.00
KB (10,240 bytes) 3/25/2003 9:00 AM

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
c:\windows\system32\msh261.drv	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\MSH261.DRV	5.2.3790.1830 184.00 KB (188,416 bytes)	2/16/2006 6:44 PM
c:\windows\system32\msyuv.dll	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\MSYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896 bytes)	3/24/2003 10:49 PM
c:\windows\system32\msvidc32.dll	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\MSVIDC32.DLL	5.2.3790.0 (srv03_rtm.030324-2048) 26.50 KB (27,136 bytes)	3/25/2003 9:00 AM
c:\windows\system32\tsbbyuv.dll	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\TSBYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048) 8.00 KB (8,192 bytes)	3/24/2003 10:50 PM
c:\windows\system32\msh263.drv	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\MSH263.DRV	5.2.3790.1830 288.00 KB (294,912 bytes)	2/16/2006 6:44 PM
c:\windows\system32\msrle32.dll	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\MSRLE32.DLL	5.2.3790.0 (srv03_rtm.030324-2048) 10.50 KB (10,752 bytes)	3/25/2003 9:00 AM
c:\windows\system32\iyuv_32.dll	Microsoft Corporation	Microsoft Windows Media Video 9.1 Codec	OK	C:\WINDOWS\system32\IYUV_32.DLL	5.2.3790.1830 (srv03_spl_rtm.050324-1447) 46.50 KB (47,616 bytes)	2/16/2006 6:44 PM

[CD-ROM]

Item	Value
Drive F:	CD-ROM Drive
Description	CD-ROM Drive
Media Loaded	Yes
Media Type	CD-ROM
Name	TEAC CD-224E
Manufacturer	(Standard CD-ROM drives)

```

Status OK
Transfer Rate 782.94 kbytes/sec
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-
224E_1.9A_5&9154BEF&0&0.
0.0
Driver c:\windows\system32\drivers\cdrom.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 51.00 KB
(52,224 bytes), 3/25/2003 9:00 AM)

```

[Sound Device]

Item	Value
Name	RAGE XL PCI Family (Microsoft Corporation)
PNP Device ID	PCI\VEN_1002&DEV_4752&SUBSYS_80081002&REV_27\4&2E98101C&0&20F0
Adapter Type	ATI RAGE XL PCI (B41), ATI Technologies Inc. compatible
Adapter Description	RAGE XL PCI Family (Microsoft Corporation)
Adapter RAM	8.00 MB (8,388,608 bytes)
Installed Drivers	ati2drad.dll
Driver Version	5.10.3663.6013
INF File	atiixpad.inf (ati2mpad section)
Color Planes	1
Color Table Entries	4294967296
Resolution	800 x 600 x 85 hertz
Bits/Pixel	32
Memory Address	0xFD000000-0xFDF00000
I/O Port	0x0000B800-0x0000B8FF
Memory Address	0xFEAF0000-0xFEAF0000
IRQ Channel	IRQ 21
I/O Port	0x000003B0-0x000003BB
I/O Port	0x000003C0-0x000003DF
Memory Address	0xA0000-0xB0000
Driver	c:\windows\system32\drivers\ati2mpad.sys (5.10.3663.6013, 335.38 KB (343,424 bytes), 2/10/2006 7:45 AM)

[Display]

Item	Value
Name	RAGE XL PCI Family (Microsoft Corporation)
PNP Device ID	PCI\VEN_1002&DEV_4752&SUBSYS_80081002&REV_27\4&2E98101C&0&20F0
Adapter Type	ATI RAGE XL PCI (B41), ATI Technologies Inc. compatible
Adapter Description	RAGE XL PCI Family (Microsoft Corporation)
Adapter RAM	8.00 MB (8,388,608 bytes)
Installed Drivers	ati2drad.dll
Driver Version	5.10.3663.6013
INF File	atiixpad.inf (ati2mpad section)
Color Planes	1
Color Table Entries	4294967296
Resolution	800 x 600 x 85 hertz
Bits/Pixel	32
Memory Address	0xFD000000-0xFDF00000
I/O Port	0x0000B800-0x0000B8FF
Memory Address	0xFEAF0000-0xFEAF0000
IRQ Channel	IRQ 21
I/O Port	0x000003B0-0x000003BB
I/O Port	0x000003C0-0x000003DF
Memory Address	0xA0000-0xB0000
Driver	c:\windows\system32\drivers\ati2mpad.sys (5.10.3663.6013, 335.38 KB (343,424 bytes), 2/10/2006 7:45 AM)

[Infrared]

Item	Value
Name	

[Input]

Item	Value
Name	

[Keyboard]

Item	Value
Description	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
Name	Enhanced (101- or 102-key)
Layout	00010416
PNP Device ID	ACPI\PNP0303\4&35F762C4&0
Number of Function Keys	12
I/O Port	0x00000060-0x0000006F
I/O Port	0x00000064-0x00000064
IRQ Channel	IRQ 1
Driver	c:\windows\system32\drivers\i8042prt.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 54.50 KB (55,808 bytes), 3/25/2003 9:00 AM)

[Pointing Device]

Item	Value
Name	

Hardware Type Microsoft PS/2 Mouse
 Number of Buttons 5
 Status OK
 PNP Device ID ACPI\PNP0F03\4&35F762C4&0
 Power Management Supported No
 Double Click Threshold 6
 Handedness Right Handed Operation
 IRQ Channel IRQ 12
 Driver c:\windows\system32\drivers\i8042prt.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 54.50 KB
 (55,808 bytes), 3/25/2003 9:00 AM)

[Modem]

Item Value

[Network]

[Adapter]

Item Value
 Name [00000001] Intel(R) PRO/100 S Server Adapter
 Adapter Type Ethernet 802.3
 Product Type Intel(R) PRO/100 S Server Adapter

Installed Yes
 PNP Device ID PCI\VEN_8086&DEV_1229&SUBSYS_1058086&REV_10\4&2E98101C&0&38F0
 Last Reset 3/23/2006 5:29 PM
 Index 1
 Service Name E100B
 IP Address 192.168.1.25
 IP Subnet 255.255.255.0
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 00:30:48:73:93:B8
 Memory Address 0xFEAFE000-0xFEAFEF00
 I/O Port 0x0000BC00-0x0000BC3F
 Memory Address 0xFEAA0000-0xFEABFFFF
 IRQ Channel IRQ 22
 Driver c:\windows\system32\drivers\el100b325.sys
 (6.6.8.1 built by: WinDDK, 138.50 KB (141,824 bytes),
 2/10/2006 7:45 AM)

Name [00000002] RAS Async Adapter
 Adapter Type Not Available
 Product Type RAS Async Adapter
 Installed Yes
 PNP Device ID Not Available
 Last Reset 3/23/2006 5:29 PM
 Index 2
 Service Name AsyncMac
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available

Name [00000003] WAN Miniport (L2TP)
 Adapter Type Not Available
 Product Type WAN Miniport (L2TP)
 Installed Yes

PNP Device ID ROOT\MS_L2TPMINIPORT\0000
 Last Reset 3/23/2006 5:29 PM
 Index 3
 Service Name Rasl2tp
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Driver c:\windows\system32\drivers\rasl2tp.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 66.00 KB
 (67,584 bytes), 3/25/2003 9:00 AM)

Name [00000004] WAN Miniport (PPTP)
 Adapter Type Wide Area Network (WAN)
 Product Type WAN Miniport (PPTP)
 Installed Yes
 PNP Device ID ROOT\MS_PPTPMINIPORT\0000
 Last Reset 3/23/2006 5:29 PM
 Index 4
 Service Name PptpMiniport
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 50:50:54:50:30:30
 Driver c:\windows\system32\drivers\rasppptp.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 61.00 KB
 (62,464 bytes), 3/25/2003 9:00 AM)

Name [00000005] WAN Miniport (PPPOE)
 Adapter Type Wide Area Network (WAN)
 Product Type WAN Miniport (PPPOE)
 Installed Yes
 PNP Device ID ROOT\MS_PPPOEMINIPORT\0000
 Last Reset 3/23/2006 5:29 PM
 Index 5
 Service Name Raspppoe
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 33:50:6F:45:30:30
 Driver c:\windows\system32\drivers\raspppoe.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 40.00 KB
 (40,960 bytes), 3/25/2003 9:00 AM)

Name [00000006] Direct Parallel
 Adapter Type Not Available
 Product Type Direct Parallel
 Installed Yes
 PNP Device ID ROOT\MS_PTMINIPORT\0000
 Last Reset 3/23/2006 5:29 PM
 Index 6
 Service Name Raspti
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available

Driver c:\windows\system32\drivers\raspti.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 19.50 KB
 (19,968 bytes), 3/25/2003 9:00 AM)

Name [00000007] WAN Miniport (IP)
 Adapter Type Not Available
 Product Type WAN Miniport (IP)
 Installed Yes
 PNP Device ID ROOT\MS_NDISWANIP\0000
 Last Reset 3/23/2006 5:29 PM
 Index 7
 Service Name Ndiswan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Driver c:\windows\system32\drivers\ndiswan.sys
 (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 91.00 KB
 (93,184 bytes), 3/25/2003 9:00 AM)

Name [00000008] Intel(R) PRO/1000 MT Network
 Connection
 Adapter Type Ethernet 802.3
 Product Type Intel(R) PRO/1000 MT Network
 Connection

Installed Yes
 PNP Device ID PCI\VEN_8086&DEV_1076&SUBSYS_10768086&REV_00\4&2E98101C&0&40F0
 Last Reset 3/23/2006 5:29 PM
 Index 8
 Service Name E1000
 IP Address 192.168.0.25
 IP Subnet 255.255.255.0
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 00:30:48:73:93:B9
 Memory Address 0xFE800000-0xFE89FFFF
 I/O Port 0x0000B400-0x0000B43F
 IRQ Channel IRQ 23
 Driver c:\windows\system32\drivers\el1000325.sys
 (7.2.17.0 built by: WinDDK, 123.00 KB (125,952 bytes),
 2/16/2006 6:32 PM)

[Protocol]

Item Value
 Name MSAFD Tcpip [TCP/IP]
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 16 bytes
 Maximum Message Size 0 bytes
 Message Oriented No
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data Yes
 Supports Graceful Closing Yes
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD Tcpip [UDP/IP]
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 16 bytes
 Maximum Message Size 63.93 KB (65,467 bytes)

Message Oriented Yes
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting Yes

Name RSVP UDP Service Provider
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 16 bytes
 Maximum Message Size 63.93 KB (65,467 bytes)

Message Oriented Yes
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption Yes
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting Yes

Name RSVP TCP Service Provider
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 16 bytes
 Maximum Message Size 0 bytes
 Message Oriented No
 Minimum Address Size 16 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption Yes
 Supports Expedited Data Yes
 Supports Graceful Closing Yes
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{67D39FFB-81C9-4614-987D-7AA9F6717AE4}] SEQPACKE 3
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No

Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{67D39FFB-81C9-4614-987D-7AA9F6717AE4}] DATAGRAM 3
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{47CB1E33-BAC0-4591-9F09-E12CE6A5BE25}] SEQPACKE 0
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{47CB1E33-BAC0-4591-9F09-E12CE6A5BE25}] DATAGRAM 0
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{7FBA9200-BC87-48A5-923C-438BC8F7FB43}] SEQPACKE 1
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{7FBA9200-BC87-48A5-923C-438BC8F7FB43}] DATAGRAM 1
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{2C28DED7-5C69-4782-AB4B-AB69FC529D9F}] SEQPACKE 2
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{2C28DED7-5C69-4782-AB4B-AB69FC529D9F}] DATAGRAM 2
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

```
[WinSock]
Item      Value
File      c:\windows\system32\winsock.dll
Size      2.80 KB (2,864 bytes)
Version   3.10

File      c:\windows\system32\wsock32.dll
Size      22.00 KB (22,528 bytes)
Version   5.2.3790.0 (srv03_rtm.030324-2048)
```

[Ports]

[Serial]

```
Item      Value
Name      Communications Port (COM1)
Status    OK
PNP Device ID      ACPI\PNP0501\1
Maximum Input Buffer Size      0
Maximum Output Buffer Size     No
Settable Baud Rate      Yes
Settable Data Bits      Yes
Settable Flow Control    Yes
Settable Parity          Yes
Settable Parity Check    Yes
Settable Stop Bits      Yes
Settable RLSD            Yes
Supports RLSD            Yes
Supports 16 Bit Mode     No
Supports Special Characters   No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on XOff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
XOff Character 19
XOffXmit Threshold 512
XOn Character 17
XOnXmit Threshold 2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control 0
I/O Port 0x000003F8-0x000003FF
IRQ Channel IRQ 4
Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 64.00 KB
(65,536 bytes), 3/25/2003 9:00 AM)

Name      Communications Port (COM2)
Status    OK
PNP Device ID      ACPI\PNP0501\2
Maximum Input Buffer Size      0
Maximum Output Buffer Size     No
Settable Baud Rate      Yes
Settable Data Bits      Yes
Settable Flow Control    Yes
```

```
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on XOff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
XOff Character 19
XOffXmit Threshold 512
XOn Character 17
XOnXmit Threshold 2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control 0
I/O Port 0x000002F8-0x000002FF
IRQ Channel IRQ 3
Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 64.00 KB
(65,536 bytes), 3/25/2003 9:00 AM)
```

[Parallel]

```
Item      Value
Name      LPT1
PNP Device ID      ACPI\PNP0400\4&35F762C4&0
I/O Port 0x00000378-0x0000037F
Driver c:\windows\system32\drivers\parport.sys
(5.2.3790.1830 (srv03_spl_rtm.050324-1447), 79.50 KB
(81,408 bytes), 3/24/2003 8:04 PM)
```

[Storage]

[Drives]

```
Item      Value
Drive     A:
Description 3 1/2 Inch Floppy Drive

Drive     C:
Description Local Fixed Disk
Compressed No
File System NTFS
Size      29.29 GB (31,453,437,952 bytes)
Free Space 25.47 GB (27,349,389,312 bytes)

Volume Name
Volume Serial Number 4030E996

Drive     D:
Description Local Fixed Disk
Compressed No
File System NTFS
```

```
Size      47.03 GB (50,494,959,616 bytes)
Free Space 46.61 GB (50,051,825,664 bytes)
```

```
Volume Name
Volume Serial Number B47247A2
```

```
Drive     E:
Description Removable Disk

Drive     F:
Description CD-ROM Disc
```

[Disks]

```
Item      Value
Description Disk drive
Manufacturer (Standard disk drives)
Model      Maxtor 6Y080M0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 2
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 1
SCSI Target ID 0
Sectors/Track 63
Size      76.33 GB (81,956,689,920 bytes)
Total Cylinders 9,964
Total Sectors 160,071,660
Total Tracks 2,540,820
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size 29.29 GB (31,453,438,464 bytes)

Partition Starting Offset 32,256 bytes
Partition Disk #0, Partition #1
Partition Size 47.03 GB (50,494,993,920 bytes)
Partition Starting Offset 31,453,470,720 bytes
```

```
Description Disk drive
Manufacturer (Standard disk drives)
Model      Flash Drive OT_USB20 USB Device
Bytes/Sector 512
Media Loaded Yes
Media Type Removable media
Partitions 1
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size      117.66 MB (123,379,200 bytes)
Total Cylinders 15
Total Sectors 240,975
Total Tracks 3,825
Tracks/Cylinder 255
Partition Disk #1, Partition #0
Partition Size 125.00 MB (131,072,000 bytes)
Partition Starting Offset 0 bytes
```

[SCSI]

```
Item      Value
Name      Intel(R) 82801EB Ultra ATA Storage
Controllers - 24DB

[IDE]
Item      Value
Name      Intel(R) 82801EB Ultra ATA Storage
Controllers - 24DB
```

Manufacturer Intel
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24DB&SUBSYS_498015D9&REV_02\3&267A616A&0&F9
 I/O Port 0x0000FC00-0x0000FC0F
 Memory Address 0xFFEFC00-0xFFEFFFFF
 Driver c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 7.50 KB (7,680 bytes), 2/10/2006 7:45 AM)

Name Primary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\3&267A616A&0&FA

I/O Port 0x000001F0-0x000001F7
 I/O Port 0x000003F6-0x000003F6
 IRQ Channel IRQ 14
 Driver c:\windows\system32\drivers\ataapi.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 3/25/2003 9:00 AM)

Name Secondary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\3&267A616A&0&FA

I/O Port 0x00000170-0x00000177
 I/O Port 0x00000376-0x00000376
 IRQ Channel IRQ 15
 Driver c:\windows\system32\drivers\ataapi.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 3/25/2003 9:00 AM)

Name Intel(R) 82801EB Ultra ATA Storage
 Controllers - 24D1
 Manufacturer Intel
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\3&267A616A&0&FA
 I/O Port 0x0000EC00-0x0000EC07
 I/O Port 0x0000E800-0x0000E803
 I/O Port 0x0000E400-0x0000E407
 I/O Port 0x0000E000-0x0000E003
 I/O Port 0x0000DC00-0x0000DC0F
 IRQ Channel IRQ 18
 Driver c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 7.50 KB (7,680 bytes), 2/10/2006 7:45 AM)

Name Primary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\3&267A616A&0&FA

Driver c:\windows\system32\drivers\ataapi.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 3/25/2003 9:00 AM)

Name Secondary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\3&267A616A&0&FA

Driver c:\windows\system32\drivers\ataapi.sys (5.2.3790.1830 (srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 3/25/2003 9:00 AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

[USB]

Device PNP Device ID
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D2&SUBSYS_498015D9&REV_02\3&267A616A&0&E8
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D4&SUBSYS_498015D9&REV_02\3&267A616A&0&E9
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_24D7&SUBSYS_498015D9&REV_02\3&267A616A&0&EA
 Standard Enhanced PCI to USB Host Controller
 PCI\VEN_8086&DEV_24DD&SUBSYS_498015D9&REV_02\3&267A616A&0&EF

[Software Environment]

[System Drivers]

Name	Description	File	Type
	Started	Start Mode	State
	Status	Error Control	Accept Pause
	Accept Stop		
abiosdsk	Abiosdsk	Not Available	Kernel Driver
	No	Disabled	Stopped
	Ignore	No	No
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver
	Running	OK	Normal
			Yes
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver
	Stopped	OK	Normal
			No
adpu160m	adpu160m	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
adpu320	adpu320	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
afcnt	afcnt	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver
	Running	OK	Normal
			Yes
ahal54x	Ahal54x	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
aic78u2	aic78u2	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No

aic78xx	aic78xx	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
aliide	AliIde	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver
	Stopped	OK	Normal
			No
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\ataapi.sys	Kernel Driver
	Running	OK	Normal
			Yes
atdisk	Atdisk	Not Available	Kernel Driver
	No	Disabled	Stopped
	Ignore	No	No
ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel Driver
	Running	OK	Ignore
			No
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver
	Stopped	OK	Normal
			No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver
	Running	OK	Normal
			Yes
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver
	Running	OK	Normal
			Yes
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver
	Stopped	OK	Normal
			No
cd20xrnt	cd20xrnt	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System Driver
	Running	Yes	Disabled
			Running
			OK
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver
	Running	OK	Normal
			Yes
changer	Changer	Not Available	Kernel Driver
	No	System	Stopped
	Ignore	No	No
clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver
	Stopped	OK	Normal
			No
cmdide	CmdIde	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No
cpqarray	Cpqarray	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	No

cpgarry2	cpgarry2	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
cpqcissm	cpqcissm	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
cpqfcalm	cpqfcalm	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
crcdisk	CRC Disk Filter Driver		
	c:\windows\system32\drivers\crcdisk.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
dac960nt	dac960nt	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
dellcerc	dellcerc	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
dfsdriver	DfsDriver	c:\windows\system32\drivers\dfs.sys	
	File System Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
disk	Disk Driver		
	c:\windows\system32\drivers\disk.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
dmboot	dmboot		
	c:\windows\system32\drivers\dmboot.sys		
	Kernel Driver	No	Disabled
	Stopped	OK	Normal
			No
			No
dmio	Logical Disk Manager Driver		
	c:\windows\system32\drivers\dmio.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
dmload	dmload		
	c:\windows\system32\drivers\dmload.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
dpti2o	dpti2o	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
e1000	Intel(R) PRO/1000 Adapter Driver		
	c:\windows\system32\drivers\e1000325.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
e100b	Intel(R) PRO Adapter Driver		
	c:\windows\system32\drivers\e100b325.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
fastfat	Fastfat		
	c:\windows\system32\drivers\fastfat.sys		
	System Driver	Yes	Disabled
	Running	OK	Normal
			Yes
fdc	Floppy Disk Controller Driver		
	c:\windows\system32\drivers\fdc.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
fips	Fips		
	c:\windows\system32\drivers\fips.sys		
	Kernel Driver	Yes	System
	Running	OK	Normal
			No
			Yes

flpydisk	Floppy Disk Driver		
	c:\windows\system32\drivers\flpydisk.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
fltmgr	FltMgr		
	c:\windows\system32\drivers\fltmgr.sys		
	System Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
ftdisk	Volume Manager Driver		
	c:\windows\system32\drivers\ftdisk.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
gpc	Generic Packet Classifier		
	c:\windows\system32\drivers\msgpc.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
hpn	hpn	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
hpt3xx	hpt3xx	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
http	HTTP		
	c:\windows\system32\drivers\http.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
i2omgmt	i2omgmt	Not Available	Kernel Driver
	No	System	Stopped
	Normal	No	OK
i2omp	i2omp	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver		
	c:\windows\system32\drivers\i8042prt.sys		
	Kernel Driver	Yes	System
	Running	OK	Normal
			No
			Yes
iirsp	iirsp	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
imapi	CD-Burning Filter Driver		
	c:\windows\system32\drivers\imapi.sys		
	Kernel Driver	No	System
	Stopped	OK	Normal
			No
intelide	IntelIde		
	c:\windows\system32\drivers\intelide.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
intelppm	Intel Processor Driver		
	c:\windows\system32\drivers\intelppm.sys		
	Kernel Driver	Yes	Manual
	Running	OK	Normal
			No
			Yes
ip6fw	IPv6 Windows Firewall Driver		
	c:\windows\system32\drivers\ip6fw.sys		
	Kernel Driver	No	Manual
	Stopped	OK	Normal
			No
ipfilterdriver	IP Traffic Filter Driver		
	c:\windows\system32\drivers\ipfltdrv.sys		
	Kernel Driver	No	Manual
	Stopped	OK	Normal
			No
ipinip	IP in IP Tunnel Driver		
	c:\windows\system32\drivers\ipinip.sys		
	Kernel Driver	No	Manual

ipnat	IP Network Address Translator		
	c:\windows\system32\drivers\ipnat.sys		
	Kernel Driver	No	Manual
	Stopped	OK	Normal
			No
			No
ipsec	IPSEC driver		
	c:\windows\system32\drivers\ipsec.sys		
	Kernel Driver	Yes	System
	Running	OK	Normal
			No
			Yes
ipsraidn	ipsraidn	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
isapnp	PnP ISA/EISA Bus Driver		
	c:\windows\system32\drivers\isapnp.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Critical
			No
			Yes
kbdclass	Keyboard Class Driver		
	c:\windows\system32\drivers\kbdclass.sys		
	Kernel Driver	Yes	System
	Running	OK	Normal
			No
			Yes
ksecdd	KSecDD		
	c:\windows\system32\drivers\ksecdd.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
lp6nds35	lp6nds35	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
mmdd	mmdd		
	c:\windows\system32\drivers\mmdd.sys		
	Kernel Driver	Yes	System
	Running	OK	Ignore
			No
			Yes
modem	Modem		
	c:\windows\system32\drivers\modem.sys		
	Kernel Driver	No	Manual
	Stopped	OK	Ignore
			No
mouclass	Mouse Class Driver		
	c:\windows\system32\drivers\mouclass.sys		
	Kernel Driver	Yes	System
	Running	OK	Normal
			No
			Yes
mountmgr	Mount Point Manager		
	c:\windows\system32\drivers\mountmgr.sys		
	Kernel Driver	Yes	Boot
	Running	OK	Normal
			No
			Yes
mraid35x	mraid35x	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
mrxdav	WebDav Client Redirector		
	c:\windows\system32\drivers\mrxdav.sys		
	System Driver	No	Manual
	Running	OK	Stopped
			Normal
			No
mrxsmb	MRXSMB		
	c:\windows\system32\drivers\mrxsmb.sys		
	System Driver	Yes	System
	Running	OK	Running
			Normal
			No
msfs	Msfs		
	c:\windows\system32\drivers\msfs.sys		
	System Driver	Yes	System
	Running	OK	Running
			Normal
			No
mssmbios	Microsoft System Management BIOS Driver		
	c:\windows\system32\drivers\mssmbios.sys		
	Kernel Driver	Yes	Manual

	Running	OK	Normal	No	Yes
mup	Mup	c:\windows\system32\drivers\mup.sys	File System Driver	Yes	Boot
	Running	OK	Normal	No	Yes
ndis	NDIS System Driver	c:\windows\system32\drivers\ndis.sys	Kernel Driver	Yes	Boot
	Running	OK	Normal	No	Yes
ndistapi	Remote Access NDIS TAPI Driver	c:\windows\system32\drivers\ndistapi.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
ndisuio	NDIS Usermode I/O Protocol	c:\windows\system32\drivers\ndisuio.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
ndiswan	Remote Access NDIS WAN Driver	c:\windows\system32\drivers\ndiswan.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
ndproxy	NDIS Proxy	c:\windows\system32\drivers\ndproxy.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
netbios	NetBIOS Interface	c:\windows\system32\drivers\netbios.sys	File System Driver	Yes	System Running
	Running	OK	Normal	No	Yes
netbt	NetBios over Tcpip	c:\windows\system32\drivers\netbt.sys	Kernel Driver	Yes	System
	Running	OK	Normal	No	Yes
nfrd960	nfrd960	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	Yes
npfs	Npfs	c:\windows\system32\drivers\npfs.sys	File System Driver	Yes	System Running
	Running	OK	Normal	No	Yes
ntfs	Ntfs	c:\windows\system32\drivers\ntfs.sys	File System Driver	Yes	Disabled Running
	Running	OK	Normal	No	Yes
null	Null	c:\windows\system32\drivers\null.sys	Kernel Driver	Yes	System
	Running	OK	Normal	No	Yes
parport	Parallel port driver	c:\windows\system32\drivers\parport.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
partmgr	Partition Manager	c:\windows\system32\drivers\partmgr.sys	Kernel Driver	Yes	Boot
	Running	OK	Normal	No	Yes
parvdm	Parvdm	c:\windows\system32\drivers\parvdm.sys	Kernel Driver	Yes	Auto
	Running	OK	Ignore	No	Yes

pci	PCI Bus Driver	c:\windows\system32\drivers\pci.sys	Kernel Driver	Yes	Boot
	Running	OK	Critical	No	Yes
pciide	PCIIde	c:\windows\system32\drivers\pciide.sys	Kernel Driver	Yes	Boot
	Running	OK	Normal	No	Yes
pcmcia	Pcmcia	c:\windows\system32\drivers\pcmcia.sys	Kernel Driver	No	Disabled
	Stopped	OK	Normal	No	No
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Manual Stopped
	Running	OK	Ignore	No	No
pdframe	PDFFRAME	Not Available	Kernel Driver	No	Manual Stopped
	Running	OK	Ignore	No	No
pdreli	PDRELI	Not Available	Kernel Driver	No	Manual Stopped
	Running	OK	Ignore	No	No
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Manual Stopped
	Running	OK	Ignore	No	No
perc2	perc2	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
perc2hib	perc2hib	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
pptpminiport	WAN Miniport (PPTP)	c:\windows\system32\drivers\raspptp.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
processor	Processor Driver	c:\windows\system32\drivers\processor.sys	Kernel Driver	No	Manual
	Running	OK	Normal	No	No
ptilink	Direct Parallel Link Driver	c:\windows\system32\drivers\ptilink.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
ql1080	ql1080	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql10wnt	ql10wnt	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql12160	ql12160	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql1240	ql1240	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql1280	ql1280	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql2100	ql2100	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql2200	ql2200	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
ql2300	ql2300	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No

rasacd	Remote Access Auto Connection Driver	c:\windows\system32\drivers\rasacd.sys	Kernel Driver	Yes	System
	Running	OK	Normal	No	Yes
rasl2tp	WAN Miniport (L2TP)	c:\windows\system32\drivers\rasl2tp.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
rasppoe	Remote Access PPPoE Driver	c:\windows\system32\drivers\rasppoe.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
raspti	Direct Parallel	c:\windows\system32\drivers\raspti.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
rdbss	Rdbss	c:\windows\system32\drivers\rdbss.sys	File System Driver	Yes	System Running
	Running	OK	Normal	No	Yes
rdpcdd	RDPcdd	c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver	Yes	System
	Running	OK	Ignore	No	Yes
rdpdr	Terminal Server Device Redirector Driver	c:\windows\system32\drivers\rdpdr.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
rdpwd	RDPWD	c:\windows\system32\drivers\rdpwd.sys	Kernel Driver	No	Manual
	Stopped	OK	Ignore	No	No
redbook	Digital CD Audio Playback Filter Driver	c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes	System
	Running	OK	Normal	No	Yes
secdrv	Secdrv	c:\windows\system32\drivers\secdrv.sys	Kernel Driver	No	Manual
	Stopped	OK	Normal	No	No
serenum	Serenum Filter Driver	c:\windows\system32\drivers\serenum.sys	Kernel Driver	Yes	Manual
	Running	OK	Normal	No	Yes
serial	Serial port driver	c:\windows\system32\drivers\serial.sys	Kernel Driver	Yes	System
	Running	OK	Ignore	No	Yes
sfloppy	Sfloppy	c:\windows\system32\drivers\sfloppy.sys	Kernel Driver	No	System
	Stopped	OK	Ignore	No	No
simbad	Simbad	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
sparrow	Sparrow	Not Available	Kernel Driver	No	Disabled Stopped
	Running	OK	Normal	No	No
srv	Srv	c:\windows\system32\drivers\srv.sys	File System Driver	Yes	Manual

	Running	OK	Normal	No	Yes
swenum	Software Bus Driver c:\windows\system32\drivers\swenum.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
symc810	symc810	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
symc8xx	symc8xx	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
symmpi	symmpi	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
sym_hi	sym_hi	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
sym_u3	sym_u3	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
tcpip	TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys				
	Kernel Driver	Yes	System		
	Running	OK	Normal	No	Yes
tdpipe	TDEPIPE c:\windows\system32\drivers\tdpipe.sys				
	Kernel Driver	No	Manual		
	Stopped	OK	Ignore	No	No
tdtcp	TDTCP c:\windows\system32\drivers\tdtcp.sys				
	Kernel Driver	No	Manual		
	Stopped	OK	Ignore	No	No
termdd	Terminal Device Driver c:\windows\system32\drivers\termdd.sys				
	Kernel Driver	Yes	System		
	Running	OK	Normal	No	Yes
toside	TosIde	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
udfs	Udfs c:\windows\system32\drivers\udfs.sys				
	System Driver	No	Disabled	Stopped	OK
	Normal	No	No		
ultra	ultra	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
update	Microcode Update Driver c:\windows\system32\drivers\update.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
usbhci	Microsoft USB 2.0 Enhanced Host Controller Miniport Driver c:\windows\system32\drivers\usbhci.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
usbhub	USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
usbstor	USB Mass Storage Driver c:\windows\system32\drivers\usbstor.sys				
	Kernel Driver	Yes	Manual		

	Running	OK	Normal	No	Yes
usbuhci	Microsoft USB Universal Host Controller Miniport Driver c:\windows\system32\drivers\usbuhci.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
vgasave	VGA Display Controller. c:\windows\system32\drivers\vgasave.sys				
	Kernel Driver	Yes	System		
	Running	OK	Ignore	No	Yes
viaide	ViaIde	Not Available		Kernel Driver	
	No	Disabled	Stopped	OK	
	Normal	No	No		
volsnap	Storage volumes c:\windows\system32\drivers\volsnap.sys				
	Kernel Driver	Yes	Boot		
	Running	OK	Normal	No	Yes
wanarp	Remote Access IP ARP Driver c:\windows\system32\drivers\wanarp.sys				
	Kernel Driver	Yes	Manual		
	Running	OK	Normal	No	Yes
wdica	WDICA	Not Available		Kernel Driver	
	No	Manual	Stopped	OK	
	Ignore	No	No		
wlbs	Network Load Balancing c:\windows\system32\drivers\wlbs.sys				
	Kernel Driver	No	Manual		
	Stopped	OK	Normal	No	No
	[Signed Drivers]				
	Device Name	Signed	Device Class		
	Driver Version	Driver Date			
	Manufacturer	INF Name	Driver Name		
	Device ID				
	Microsoft	System Management BIOS Driver	Yes		
	SYSTEM	5.2.3790.1830	10/1/2002		
	(Standard system devices)	machine.inf			
	Not Available	ROOT\SYSTEM\0002			
	Microcode	Update Device	Yes	SYSTEM	
	5.2.3790.0	10/1/2002	(Standard		
	system devices)	machine.inf	Not Available		
	Plug and Play	Software Device Enumerator	Yes		
	SYSTEM	5.2.3790.0	10/1/2002		
	(Standard system devices)	machine.inf			
	Not Available	ROOT\SYSTEM\0000			
	Terminal	Server Mouse Driver	Yes	SYSTEM	
	5.2.3790.0	10/1/2002	(Standard		
	system devices)	machine.inf	Not Available		
	ROOT\RDP_MOU\0000				
	Terminal	Server Keyboard Driver	Yes		
	SYSTEM	5.2.3790.0	10/1/2002		
	(Standard system devices)	machine.inf			
	Not Available	ROOT\RDP_KBD\0000			
	Terminal	Server Device Redirector	Yes		
	SYSTEM	5.2.3790.0	10/1/2002		
	(Standard system devices)	machine.inf			
	Direct	Parallel	Yes	NET	5.2.3790.0
	10/1/2002	Microsoft	netrasa.inf		Not
	Available	ROOT\MS_PTMINIPORT\0000			
	WAN	Miniport (PPTP)	Yes	NET	5.2.3790.0
	10/1/2002	Microsoft	netrasa.inf		Not
	Available	ROOT\MS_PPTMINIPORT\0000			

WAN	Miniport (PPPOE)	Yes	NET		
	5.2.3790.0	10/1/2002	Microsoft		
	netrasa.inf		Not Available		
	ROOT\MS_PPPOEMINIPORT\0000				
WAN	Miniport (IP)	Yes	NET	5.2.3790.0	
	10/1/2002	Microsoft	netrasa.inf		Not
	Available	ROOT\MS_NDISWANIP\0000			
WAN	Miniport (L2TP)	Yes	NET	5.2.3790.0	
	10/1/2002	Microsoft	netrasa.inf		Not
	Available	ROOT\MS_L2TPMINIPORT\0000			
Video	Codecs	Yes	MEDIA	5.2.3790.0	
	10/1/2002	(Standard system devices)			
	wave.inf		Not Available		
	ROOT\MEDIA\MS_MMVID				
Legacy	Video Capture Devices	Yes	MEDIA		
	5.2.3790.0	10/1/2002	(Standard		
	system devices)	wave.inf	Not Available		
	ROOT\MEDIA\MS_MMVCD				
Media	Control Devices	Yes	MEDIA		
	5.2.3790.0	10/1/2002	(Standard		
	system devices)	wave.inf	Not Available		
	ROOT\MEDIA\MS_MMMCI				
Legacy	Audio Drivers	Yes	MEDIA		
	5.2.3790.0	10/1/2002	(Standard		
	system devices)	wave.inf	Not Available		
	ROOT\MEDIA\MS_MMDRV				
Audio	Codecs	Yes	MEDIA	5.2.3790.0	
	10/1/2002	(Standard system devices)			
	wave.inf		Not Available		
	ROOT\MEDIA\MS_MMACM				
Remote	Access IP ARP Driver	Not Available			
	LEGACYDRIVER	Not Available			Not
Available	Not Available	Not Available			Not
Available	ROOT\LEGACY_WANARP\0000				
volsnap	Not Available	LEGACYDRIVER			Not
Available	Not Available	Not Available			Not
Available	Not Available	Not Available			Not
Available	Not Available	ROOT\LEGACY_VOLSAP\0000			
VGA	Display Controller.	Not Available			
	LEGACYDRIVER	Not Available			Not
Available	Not Available	Not Available			Not
Available	ROOT\LEGACY_VGASAVE\0000				
TCP/IP	Protocol Driver	Not Available			
	LEGACYDRIVER	Not Available			Not
Available	Not Available	Not Available			Not
Available	ROOT\LEGACY_TCPIP\0000				
RDPCDD	Not Available	LEGACYDRIVER			Not
Available	Not Available	Not Available			Not
Available	Not Available	ROOT\LEGACY_RDPCCDD\0000			
Remote	Access Auto Connection	Driver	Not Available		
	LEGACYDRIVER	Not Available			Not
Available	Not Available	Not Available			Not
Available	ROOT\LEGACY_RASACD\0000				
PCIId	Not Available	LEGACYDRIVER			Not
Available	Not Available	Not Available			Not
Available	Not Available	ROOT\LEGACY_PCIIDE\0000			
Parvdm	Not Available	LEGACYDRIVER			Not
Available	Not Available	Not Available			Not
Available	Not Available	ROOT\LEGACY_PARVDM\0000			
Partition	Manager	Not Available			LEGACYDRIVER
	Not Available	Not Available			Not
Available	Not Available	Not Available			Not
	ROOT\LEGACY_PARTMGR\0000				
Null	Not Available	LEGACYDRIVER			Not
Available	Not Available	Not Available			Not
Available	Not Available	ROOT\LEGACY_NULL\0000			
NetBios	over Tcpip	Not Available			LEGACYDRIVER
	Not Available	Not Available			Not

Available Not Available Not Available
 ROOT\LEGACY_NETBT\0000
 NDProxy Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_NDPROXY\0000

NDIS Usermode I/O Protocol Not Available
 LEGACYDRIVER Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_NDISUIO\0000
 Remote Access NDIS TAPI Driver Not Available
 LEGACYDRIVER Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_NDIS\0000
 NDIS System Driver Not Available LEGACYDRIVER
 Not Available Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_MOUNTMGR\0000

mountmgr Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_MOUNTMGR\0000

mmdd Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_MMDD\0000

ksecdd Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_KSECDD\0000

IPSEC driver Not Available LEGACYDRIVER
 Not Available Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_IPSEC\0000

HTTP Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_HTTP\0000

Generic Packet Classifier Not Available
 LEGACYDRIVER Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_GPC\0000
 Fips Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_FIPS\0000

dmload Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_DMLOAD\0000

dmboot Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_DMBOOT\0000

CRC Disk Filter Driver Not Available
 LEGACYDRIVER Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_CRCDISK\0000
 Beep Not Available LEGACYDRIVER Not
 Available Not Available Not Available Not
 Available Not Available ROOT\LEGACY_BEEP\0000

AFD Networking Support Environment Not Available
 LEGACYDRIVER Not Available Not
 Available Not Available Not Available Not
 Available ROOT\LEGACY_AFD\0000
 Generic volume Yes VOLUME 5.2.3790.0
 10/1/2002 Microsoft volume.inf Not
 Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREBB17BB17
 OFFSET752C65E00LENGTBC1BBF800

Generic volume Yes VOLUME 5.2.3790.0
 10/1/2002 Microsoft volume.inf Not
 Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREBB17BB17
 OFFSET7E00LENGTH752C56200
 Volume Manager Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ROOT\FTDISK\0000
 Logical Disk Manager Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ROOT\DMIO\0000
 ACPI Fixed Feature Button Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\FIXEDBUTTON\2&DABA3FF&0
 ACPI Sleep Button Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ACPI\PNP0C0E\2&DABA3FF&0
 ACPI Power Button Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ACPI\PNP0C0C\AA
 System board Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ACPI\PNP0C01\1
 Intel(R) 82801EB SMBus Controller - 24D3 Yes
 SYSTEM 5.2.3790.1830 10/1/2002 Intel
 machine.inf Not Available
 PCI\VEN_8086&DEV_24D3&SUBSYS_498015D9&REV_02\
 3&267A616A&0&FB
 Secondary IDE Channel Yes HDC
 5.2.3790.0 10/1/2002 (Standard IDE
 controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&3A6556&0&1
 Disk drive Yes DISKDRIVE 5.2.3790.0
 10/1/2002 (Standard disk drives)
 disk.inf Not Available
 IDE\DISKMAXTOR_6Y080M0
 ___YAR51HW0\3259594C3133454820202020202020202020
 Primary IDE Channel Yes HDC 5.2.3790.0
 10/1/2002 (Standard IDE ATA/ATAPI
 controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&3A6556&0&0
 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1
 Yes HDC 5.2.3790.1830
 10/1/2002 Intel mshdc.inf Not Available
 PCI\VEN_8086&DEV_24D1&SUBSYS_498015D9&REV_02\
 3&267A616A&0&FA
 Secondary IDE Channel Yes HDC
 5.2.3790.0 10/1/2002 (Standard IDE
 controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&973A536&0&1
 CD-ROM Drive Yes CDROM 5.2.3790.0
 10/1/2002 (Standard CD-ROM drives)
 cdrom.inf Not Available
 IDE\CDROMTEAC_CD-
 224E_____1.9A_____5&9154BEF&0&0.
 0.0
 Primary IDE Channel Yes HDC 5.2.3790.0
 10/1/2002 (Standard IDE ATA/ATAPI
 controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&973A536&0&0
 Intel(R) 82801EB Ultra ATA Storage Controllers - 24DB
 Yes HDC 5.2.3790.1830
 10/1/2002 Intel mshdc.inf Not Available
 PCI\VEN_8086&DEV_24DB&SUBSYS_498015D9&REV_02\
 3&267A616A&0&F9

Motherboard resources Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0C02\2E
 Microsoft PS/2 Mouse Yes MOUSE
 5.2.3790.0 10/1/2002 Microsoft
 msmouse.inf Not Available
 ACPI\PNP0F03\4&35F762C4&0
 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
 Yes KEYBOARD 5.2.3790.0
 10/1/2002 (Standard keyboards)
 keyboard.inf Not Available
 ACPI\PNP0303\4&35F762C4&0
 Motherboard resources Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0C02\0
 Motherboard resources Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0C02\10
 Printer Port Logical Interface Yes
 SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf
 Not Available
 LPTENUM\MICROSOFTRAWPORT\5&AAA5BEF&0&LPT1
 Printer Port Yes PORTS 5.2.3790.0
 10/1/2002 (Standard port types)
 msports.inf Not Available
 ACPI\PNP0400\4&35F762C4&0
 Floppy disk drive Yes FLOPPYDISK
 5.2.3790.0 10/1/2002 (Standard
 floppy disk drives) flpydisk.inf Not Available
 FDC\GENERIC_FLOPPY_DRIVE\5&35AD0CB2&0&0
 Standard floppy disk controller Yes FDC
 5.2.3790.0 10/1/2002 (Standard
 floppy disk controllers) fdc.inf Not Available
 ACPI\PNP0700\4&35F762C4&0
 Communications Port Yes PORTS 5.2.3790.0
 10/1/2002 (Standard port types)
 msports.inf Not Available
 ACPI\PNP0501\2
 Communications Port Yes PORTS 5.2.3790.0
 10/1/2002 (Standard port types)
 msports.inf Not Available
 ACPI\PNP0501\1
 Numeric data processor Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0C04\4&35F762C4&0
 System speaker Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ACPI\PNP0800\4&35F762C4&0
 System CMOS/real time clock Yes SYSTEM
 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0B00\4&35F762C4&0
 System timer Yes SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices)
 machine.inf Not Available
 ACPI\PNP0100\4&35F762C4&0
 Direct memory access controller Yes
 SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf
 Not Available ACPI\PNP0200\4&35F762C4&0
 Programmable interrupt controller Yes
 SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf

```

Not Available          ACPI\PNP0000\4&35F762C4&0
ISAPNP Read Data Port Yes          SYSTEM
5.2.3790.0            10/1/2002 (Standard
system devices)      machine.inf Not Available
ISAPNP\READDATAPORT\0
Intel(R) 82801EB LPC Interface Controller - 24D0 Yes
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_24D0&SUBSYS_00000000&REV_02\
3&267A616A&0&F8
Intel(R) PRO/1000 MT Network Connection Yes NET
7.2.17.0 8/14/2003 Intel oem0.inf Not
Available
PCI\VEN_8086&DEV_1076&SUBSYS_10768086&REV_00\
4&2E98101C&0&40F0
Intel(R) PRO/100 S Server Adapter Yes NET
6.6.8.1 10/1/2002 Intel net557.inf
Not Available
PCI\VEN_8086&DEV_1229&SUBSYS_10508086&REV_10\
4&2E98101C&0&38F0
Default Monitor Yes MONITOR 5.1.2001.0
6/6/2001 (Standard monitor types)
monitor.inf Not Available
DISPLAY\DEFAULT_MONITOR\5&237DE87D&0&80000000
&01&04
RAGE XL PCI Family (Microsoft Corporation) Yes
DISPLAY 5.10.2600.6014 8/8/2001 ATI
Technologies Inc. atiixpad.inf Not Available
PCI\VEN_1002&DEV_4752&SUBSYS_80081002&REV_27\
4&2E98101C&0&20F0
Intel(R) 82801 PCI Bridge - 244E Yes
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_C2\
3&267A616A&0&F0
Generic volume Yes VOLUME 5.2.3790.0
10/1/2002 Microsoft volume.inf Not
Available STORAGE\REMOVABLEMEDIA\7&EAF53AF&0&RM
Disk drive Yes DISKDRIVE 5.2.3790.0
10/1/2002 (Standard disk drives)
disk.inf Not Available
USBSTOR\DISK&VEN_FLASH&PROD_DRIVE_OT_USB20&RE
V_2_00\382F41ACD2950022&0
USB Mass Storage Device Yes USB
5.2.3790.0 10/1/2002 Compatible USB
storage device usbstor.inf Not Available
USB\VID_0EA0&PID_2168\382F41ACD2950022
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB20\4&846DC72&0
Standard Enhanced PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D4&SUBSYS_498015D9&REV_02\
3&267A616A&0&E9
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&33D404DA&0
Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D7&SUBSYS_498015D9&REV_02\
3&267A616A&0&EA
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&36AE36F1&0

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Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D4&SUBSYS_498015D9&REV_02\
3&267A616A&0&E9
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&6EA0A9&0
Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D2&SUBSYS_498015D9&REV_02\
3&267A616A&0&E8
Intel(R) E7501 Chipset Host Controller - 254C Yes
SYSTEM 5.2.3790.0 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_254C&SUBSYS_00000000&REV_01\
3&267A616A&0&00
PCI bus Yes SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices)
machine.inf Not Available
ACPI\PNP0A03\0
Intel Processor Yes PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_1
Intel Processor Yes PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_0
Microsoft ACPI-Compliant System Yes
SYSTEM 5.2.3790.0 10/1/2002
Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC Yes COMPUTER
5.2.3790.0 10/1/2002 (Standard
computers) hal.inf Not Available
ROOT\ACPI_HAL\0000
Not Available Not Available Not Available
Not Available Not Available Not Available
Available Not Available Not Available
HTREE\ROOT\0

[Environment Variables]
Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path %SystemRoot%\system32;%SystemRoot%;%SystemRoo
t%\System32\Wbem <SYSTEM>
windir %SystemRoot% <SYSTEM>
OS Windows_NT <SYSTEM>
PROCESSOR_ARCHITECTURE x86 <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_IDENTIFIER x86 Family 15 Model 2
Stepping 9, GenuineIntel <SYSTEM>
PROCESSOR_REVISION 0209 <SYSTEM>
NUMBER_OF_PROCESSORS 2 <SYSTEM>
ClusterLog C:\WINDOWS\Cluster\cluster.log
<SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.
WSH <SYSTEM>
TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM

```

```

TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\LOCAL SERVICE
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\LOCAL SERVICE
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TEMP %USERPROFILE%\Local Settings\Temp
CLI05\Administrator
TMP %USERPROFILE%\Local Settings\Temp
CLI05\Administrator

[Print Jobs]
Document Size Owner Notify Status Time
Submitted Start Time Until Time
ID Elapsed Time Pages Printed Job
Priority Parameters Driver Print
Processor Host Print Queue Data Type Name

[Network Connections]
Local Name Remote Name Type
Status User Name

[Running Tasks]
Name Path Process ID Priority Min
Working Set Max Working Set Start Time
Version Size File Date
system idle process Not Available 0 0
Not Available Not Available Not
Available Not Available Not Available
system Not Available 4 8 0
1413120 Not Available Not Available
Not Available Not Available
smss.exe 508 11
204800 1413120 3/23/2006 5:30 PM Not
Available Not Available Not Available
csrss.exe 628 13 Not
Available Not Available 3/23/2006 5:30 PM Not
Available Not Available Not Available
winlogon.exe c:\windows\system32\winlogon.exe
944 13 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 497.00 KB (508,928 bytes)
2/16/2006 6:43 PM
services.exe c:\windows\system32\services.exe
988 9 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 107.50 KB (110,080 bytes)
3/25/2003 9:00 AM
lsass.exe c:\windows\system32\lsass.exe 1000 9
204800 1413120 3/23/2006 5:30 PM
5.2.3790.0 (srv03_rtm.030324-2048) 13.00
KB (13,312 bytes) 3/25/2003 9:00 AM
svchost.exe c:\windows\system32\svchost.exe
1220 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:43 PM
svchost.exe Not Available 1308 8
Not Available Not Available
3/23/2006 5:30 PM Not Available Not
Available Not Available
svchost.exe Not Available 1400 8
Not Available Not Available

```

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3/23/2006 5:30 PM Not Available Not
Available Not Available
svchost.exe Not Available 1476 8
Not Available Not Available
3/23/2006 5:30 PM Not Available Not
Available Not Available
svchost.exe c:\windows\system32\svchost.exe
1488 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:43 PM
spoolsv.exe c:\windows\system32\spoolsv.exe
2000 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 57.00 KB (58,368 bytes)
2/16/2006 6:43 PM
msdtc.exe Not Available 2032 8 Not
Available Not Available 3/23/2006 5:30 PM Not
Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe
384 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:43 PM
inetinfo.exe
c:\windows\system32\inethttp\inetinfo.exe
488 8 204800 1413120
3/23/2006 5:30 PM 6.0.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:45 PM
svchost.exe Not Available 592 8
Not Available Not Available
3/23/2006 5:30 PM Not Available Not
Available Not Available
svchost.exe c:\windows\system32\svchost.exe
1464 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:43 PM
svchost.exe c:\windows\system32\svchost.exe
1744 8 204800 1413120
3/23/2006 5:30 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes)
2/16/2006 6:43 PM
explorer.exe c:\windows\explorer.exe 844
8 204800 1413120 3/23/2006 5:30
PM 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
1.00 MB (1,050,624 bytes) 2/16/2006 6:44
PM
wmiprvse.exe Not Available 908 8
Not Available Not Available
3/23/2006 5:31 PM Not Available Not
Available Not Available
notepad.exe c:\windows\system32\notepad.exe
652 8 204800 1413120
3/30/2006 1:55 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 67.00 KB (68,608 bytes)
2/16/2006 6:43 PM
regedit.exe c:\windows\regedit.exe 1648
8 204800 1413120 3/30/2006 1:55
PM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
144.00 KB (147,456 bytes) 3/24/2005 8:44
PM
dllhost.exe c:\windows\system32\dllhost.exe
616 8 204800 1413120
3/30/2006 1:57 PM 5.2.3790.0
(srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
3/25/2003 9:00 AM
mmc.exe c:\windows\system32\mmc.exe 2872 8
204800 1413120 3/30/2006 2:02 PM
5.2.3790.1830 (srv03_spl_rtm.050324-1447)

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829.00 KB (848,896 bytes) 2/16/2006 6:44
PM
helpctr.exe
c:\windows\pchealth\helpctr\binaries\helpctr.
exe 2776 8 204800 1413120
3/30/2006 2:08 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 778.00 KB (796,672 bytes)
2/16/2006 6:45 PM
helpsvcs.exe
c:\windows\pchealth\helpctr\binaries\helpsvcs.
exe 544 8 204800 1413120
3/30/2006 2:08 PM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 745.00 KB (762,880 bytes)
2/16/2006 6:45 PM
wmiprvse.exe Not Available 2060 8
Not Available Not Available
3/30/2006 2:08 PM Not Available Not
Available Not Available
[Loaded Modules]
Name Version Size File Date Manufacturer
Path
winlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
497.00 KB (508,928 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
748.50 KB (766,464 bytes) 3/25/2003 9:00
AM Microsoft Corporation
c:\windows\system32\ntdll.dll
kernel32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1,014.00 KB (1,038,336 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\kernel32.dll
advapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
605.50 KB (620,032 bytes) 3/25/2003 9:00
AM Microsoft Corporation
c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
627.00 KB (642,048 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\rpcrt4.dll
crypt32 5.131.3790.1830 (srv03_spl_rtm.050324-1447)
582.00 KB (595,968 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\crypt32.dll
msasn1 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
56.50 KB (57,856 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\msasn1.dll
msvcrt 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
340.50 KB (348,672 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
574.50 KB (588,288 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
273.00 KB (279,552 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\gdi32.dll
nddeapi 5.2.3790.0 (srv03_rtm.030324-2048) 16.00
KB (16,384 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
22.50 KB (23,040 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\profmap.dll

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netapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
341.50 KB (349,696 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\netapi32.dll
userenv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
771.00 KB (789,504 bytes) 3/25/2003 9:00
AM Microsoft Corporation
c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
20.00 KB (20,480 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
55.00 KB (56,320 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
64.00 KB (65,536 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\secur32.dll
setupapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.03 MB (1,079,808 bytes) 3/25/2003 9:00
AM Microsoft Corporation
c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
18.00 KB (18,432 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
54.50 KB (55,808 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
82.00 KB (83,968 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
19.50 KB (19,968 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.16 MB (1,211,904 bytes) 2/16/2006 6:44
PM Microsoft Corporation
c:\windows\system32\msgina.dll
shsvcs 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
131.50 KB (134,656 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
313.50 KB (321,024 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\shlwapi.dll
sfc 5.2.3790.0 (srv03_rtm.030324-2048) 4.50
KB (4,608 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\sfc.dll
sfc_os 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
138.00 KB (141,312 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.1830 (srv03_spl_rtm.050324-1447)
162.00 KB (165,888 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\wintrust.dll
imagehlp 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
145.50 KB (148,992 bytes) 3/25/2003 9:00
AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
ole32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.19 MB (1,245,184 bytes) 2/16/2006 6:43
PM Microsoft Corporation
c:\windows\system32\ole32.dll

```

comctl32 6.0 (srv03_spl_rtm.050324-1447) 1.00 MB (1,051,136 bytes) 3/24/2005 9:41 PM
 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.windows.commo
 n-controls_6595b64144ccf1df_6.0.3790.1830_x-ww_7ae38ccf\comctl32.dll
 wincard 5.2.3790.0 (srv03_rtm.030324-2048) 98.50 KB (100,864 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\wincard.dll
 wtsapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.00 KB (19,456 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\wtsapi32.dll
 winmm 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 172.50 KB (176,640 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\winmm.dll
 sxss 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 743.50 KB (761,344 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\sxss.dll
 shell32 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 7.99 MB (8,379,392 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\shell32.dll
 rsaenh 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 183.98 KB (188,392 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\rsaenh.dll
 wldap32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 174.50 KB (178,688 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\wldap32.dll
 csccdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 100.00 KB (102,400 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\csccdll.dll
 dimntfy 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.00 KB (19,456 bytes) 2/16/2006 6:46 PM
 Microsoft Corporation
 c:\windows\system32\dimntfy.dll
 wlnotify 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 94.50 KB (96,768 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\wlnotify.dll
 mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\mpr.dll
 oleaut32 5.2.3790.1830 543.00 KB (556,032 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\oleaut32.dll
 winspool 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 147.00 KB (150,528 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\winspool.drv
 comctl32 5.82 (srv03_spl_rtm.050324-1447) 585.00 KB (599,040 bytes) 3/24/2005 9:41 PM
 Microsoft Corporation
 c:\windows\winsxs\x86_microsoft.windows.commo
 n-controls_6595b64144ccf1df_5.82.3790.1830_x-ww_lb6f474a\comctl32.dll
 uxtheme 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 202.00 KB (206,848 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\uxtheme.dll
 samlib 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 46.50 KB (47,616 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\samlib.dll
 csccui 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 319.50 KB (327,168 bytes) 2/16/2006 6:44

PM Microsoft Corporation
 c:\windows\system32\csccui.dll
 clbcatq 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 502.50 KB (514,560 bytes) 2/16/2006 6:44
 Microsoft Corporation
 c:\windows\system32\clbcatq.dll
 comres 2001.12.4720.0 (srv03_rtm.030324-2048) 778.00 KB (796,672 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\comres.dll
 ntmarta 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 120.50 KB (123,392 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\ntmarta.dll
 xpsp2res 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 2.76 MB (2,897,920 bytes) 2/16/2006 6:46 PM
 Microsoft Corporation
 c:\windows\system32\xpsp2res.dll
 wbemprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 20.50 KB (20,992 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\wbem\wbemprox.dll
 wbemcomn 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 221.00 KB (226,304 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\wbem\wbemcomn.dll
 wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes) 2/10/2006 11:57 AM Microsoft Corporation
 c:\windows\system32\wbem\wbemsvc.dll
 fastprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 471.00 KB (482,304 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\wbem\fastprox.dll
 msvcp60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\msvcp60.dll
 ntdsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 71.00 KB (72,704 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\ntdsapi.dll
 dnsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 153.50 KB (157,184 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\dnsapi.dll
 services 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 107.50 KB (110,080 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\services.exe
 ncobjapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 36.00 KB (36,864 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\ncobjapi.dll
 scesrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 327.00 KB (334,848 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\scesrv.dll
 authz 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 66.50 KB (68,096 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\authz.dll
 umpnpgmr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 126.50 KB (129,536 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\umpnpgmr.dll
 eventlog 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 67.50 KB (69,120 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\eventlog.dll
 lsass 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\lsass.exe

lsasrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 803.00 KB (822,272 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\lsasrv.dll
 samsrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 450.50 KB (461,312 bytes) 3/25/2003 9:00 AM
 Microsoft Corporation
 c:\windows\system32\samsrv.dll
 cryptdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 32.00 KB (32,768 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\cryptdll.dll
 msprivs 5.2.3790.0 (srv03_rtm.030324-2048) 46.50 KB (47,616 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\msprivs.dll
 kerberos 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 340.50 KB (348,672 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\kerberos.dll
 msvl_0 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 141.00 KB (144,384 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\msvl_0.dll
 iphlpapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 92.50 KB (94,720 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\iphlpapi.dll
 netlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 409.50 KB (419,328 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\netlogon.dll
 w32time 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 222.00 KB (227,328 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\w32time.dll
 schannel 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 141.00 KB (144,384 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\schannel.dll
 wdigest 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 74.00 KB (75,776 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\wdigest.dll
 rassfm 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 23.00 KB (23,552 bytes) 2/16/2006 6:45 PM
 Microsoft Corporation
 c:\windows\system32\rassfm.dll
 kdcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 213.50 KB (218,624 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\kdcsvc.dll
 ntdsa 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1.45 MB (1,516,032 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\ntdsa.dll
 esent 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1,022.50 KB (1,047,040 bytes) 2/16/2006 6:44 PM
 Microsoft Corporation
 c:\windows\system32\esent.dll
 ntdsatq 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 29.50 KB (30,208 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\ntdsatq.dll
 mswsock 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 250.50 KB (256,512 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\mswsock.dll
 scecli 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 186.50 KB (190,976 bytes) 2/16/2006 6:43 PM
 Microsoft Corporation
 c:\windows\system32\scecli.dll

ws03res 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 793.50 KB (812,544 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\ws03res.dll
 hnetcfg 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 343.50 KB (351,744 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\hnetcfg.dll
 wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\wshtcpip.dll
 ipsecsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 180.50 KB (184,832 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\ipsecsvc.dll
 oakley 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 264.00 KB (270,336 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\oakley.dll
 winipsec 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 35.50 KB (36,352 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\winipsec.dll
 pstorsvc 5.2.3790.0 (srv03_rtm.030324-2048) 24.00 KB (24,576 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\pstorsvc.dll
 psbase 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 84.00 KB (86,016 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\psbase.dll
 dssenh 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 139.98 KB (143,336 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\dssenh.dll
 wlbctrl 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 82.00 KB (83,968 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\wlbctrl.dll
 svchost 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\svchost.exe
 rpcss 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 406.00 KB (415,744 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\rpcss.dll
 wzcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 364.50 KB (373,248 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\wzcsvc.dll
 rtutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 34.50 KB (35,328 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\rtutils.dll
 wmi 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\wmi.dll
 dhcpcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 113.50 KB (116,224 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\dhcpcsvc.dll
 atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\atl.dll
 rastls 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 180.00 KB (184,320 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\rastls.dll
 cryptui 5.131.3790.1830 (srv03_spl_rtm.050324-1447) 496.50 KB (508,416 bytes) 2/16/2006 6:44

PM Microsoft Corporation
 c:\windows\system32\cryptui.dll
 mprapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 89.00 KB (91,136 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\mprapi.dll
 activeds 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 194.00 KB (198,656 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\activeds.dll
 adsldpc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 146.00 KB (149,504 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\adsldpc.dll
 credui 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 162.00 KB (165,888 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\credui.dll
 rasapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 239.50 KB (245,248 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\rasapi32.dll
 rasman 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 61.50 KB (62,976 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\rasman.dll
 tapi32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 179.50 KB (183,808 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\tapi32.dll
 raschap 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 119.50 KB (122,368 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\raschap.dll
 schedsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 197.50 KB (202,240 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\schedsvc.dll
 msidle 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 6.50 KB (6,656 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\msidle.dll
 wkssvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 130.00 KB (133,120 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\wkssvc.dll
 wiarpc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 32.50 KB (33,280 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\wiarpc.dll
 aelupsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 26.00 KB (26,624 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\aelupsvc.dll
 apphelp 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 146.50 KB (150,016 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\apphelp.dll
 cryptsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 55.50 KB (56,832 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\cryptsvc.dll
 certcli 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 227.00 KB (232,448 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\certcli.dll
 vssapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 548.00 KB (561,152 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\vssapi.dll
 dmserver 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 25.50 KB (26,112 bytes) 2/16/2006 6:44

PM Microsoft Corporation
 c:\windows\system32\dmserver.dll
 es 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 233.00 KB (238,592 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\es.dll
 pchsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 39.00 KB (39,936 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\pchsvc.dll
 ll
 srvsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 93.50 KB (95,744 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\srvsvc.dll
 seclogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 18.50 KB (18,944 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\seclogon.dll
 sens 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 36.50 KB (37,376 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\sens.dll
 trkwks 5.2.3790.0 (srv03_rtm.030324-2048) 85.00 KB (87,040 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\trkwks.dll
 wmisvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 140.00 KB (143,360 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\wbem\wmisvc.dll
 wuauerv 5.7.3790.1830 (srv03_spl_rtm.050324-1447) 8.00 KB (8,192 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\wuauerv.dll
 wuaueng 5.7.3790.1830 (srv03_spl_rtm.050324-1447) 1.18 MB (1,232,896 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\wuaueng.dll
 advpack 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 98.00 KB (100,352 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\advpack.dll
 cabinet 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 81.50 KB (83,456 bytes) 3/24/2005 8:35
 PM Microsoft Corporation
 c:\windows\system32\cabinet.dll
 mspatcha 5.2.3790.0 (srv03_rtm.030324-2048) 29.00 KB (29,696 bytes) 3/25/2003 9:00 AM Microsoft Corporation
 c:\windows\system32\mspatcha.dll
 shfolder 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 24.50 KB (25,088 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\shfolder.dll
 winhttp 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 353.00 KB (361,472 bytes) 3/24/2005 9:41
 PM Microsoft Corporation
 c:\windows\xmns\x86_microsoft.windows.winhttp_6595b64144ccf1df_5.1.3790.1830_x-ww_74150efb\winhttp.dll
 comsvcs 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 1.19 MB (1,248,256 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\comsvcs.dll
 browser 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 76.50 KB (78,336 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\browser.dll
 netman 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 258.50 KB (264,704 bytes) 2/16/2006 6:43

PM Microsoft Corporation
c:\windows\system32\netman.dll
netshell 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.73 MB (1,812,992 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
60.00 KB (61,440 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\clusapi.dll
wininet 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
646.00 KB (661,504 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
41.00 KB (41,984 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\wzcsapi.dll
wbemcore 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
497.50 KB (509,440 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll
esscli 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
250.00 KB (256,000 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\esscli.dll
wmiutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
93.50 KB (95,744 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
172.50 KB (176,640 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
404.00 KB (413,696 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
271.50 KB (278,016 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll
rasdlg 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
663.00 KB (678,912 bytes) 3/25/2003 9:00
Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
7.50 KB (7,680 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\rasadhlp.dll
netrap 5.2.3790.0 (srv03_rtm.030324-2048) 11.50
KB (11,776 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\netrap.dll
ncprov 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
46.50 KB (47,616 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 8.00
KB (8,192 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\ntlsapi.dll
xactsrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
90.00 KB (92,160 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\xactsrv.dll
wbemcons 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
45.50 KB (46,592 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll
spoolsv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
57.00 KB (58,368 bytes) 2/16/2006 6:43

PM Microsoft Corporation
c:\windows\system32\spoolsv.exe
spoolss 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
85.00 KB (87,040 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\spoolss.dll
localspl 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
339.00 KB (347,136 bytes) 3/25/2003 9:00
Microsoft Corporation
c:\windows\system32\localspl.dll
cnbjmon 5.2.3790.1224 (dnsvr\skatari).040514-1058)
46.50 KB (47,616 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\cnbjmon.dll
pjlmmon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
15.00 KB (15,360 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\pjlmmon.dll
tcpmon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
47.00 KB (48,128 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\tcpmon.dll
wsnmp32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
43.00 KB (44,032 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\wsnmp32.dll
tcpmib 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
17.50 KB (17,920 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\tcpmib.dll
wssock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00
KB (22,528 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\wssock32.dll
mgmtapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
15.50 KB (15,872 bytes) 3/25/2003 9:00
Microsoft Corporation
c:\windows\system32\mgmtapi.dll
snmpapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
19.50 KB (19,968 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\snmpapi.dll
usbmon 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
17.00 KB (17,408 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\usbmon.dll
winnr 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
17.00 KB (17,408 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\winnr.dll
wshqos 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
24.00 KB (24,576 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\wshqos.dll
win32spl 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
100.50 KB (102,912 bytes) 3/25/2003 9:00
Microsoft Corporation
c:\windows\system32\win32spl.dll
inetpp 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
75.00 KB (76,800 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\inetpp.dll
icmp 5.2.3790.0 (srv03_rtm.030324-2048) 4.50
KB (4,608 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\icmp.dll
ersvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
24.00 KB (24,576 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\ersvc.dll
inetinfo 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
14.00 KB (14,336 bytes) 2/16/2006 6:45
Microsoft Corporation

c:\windows\system32\inetinfo.exe
iisutil 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
164.00 KB (167,936 bytes) 2/16/2006 6:46
Microsoft Corporation
c:\windows\system32\inetinfo\iisutil.dll
rpref 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
4.00 KB (4,096 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\iisutil.dll
iisrsl 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
138.50 KB (141,824 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\iisrsl.dll
iisadmin 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
21.00 KB (21,504 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\iisadmin.dll
coadmin 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
62.50 KB (64,000 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\coadmin.dll
admprox 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
47.00 KB (48,128 bytes) 2/16/2006 6:46
Microsoft Corporation
c:\windows\system32\inetinfo\admprox.dll
iiscfg 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
1.08 MB (1,133,056 bytes) 2/16/2006 6:46
Microsoft Corporation
c:\windows\system32\iiscfg.dll
metadata 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
229.00 KB (234,496 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\metadata.dll
msxml3 8.70.1104.0 1.06 MB (1,107,456 bytes)
2/16/2006 6:43 PM Microsoft Corporation
c:\windows\system32\msxml3.dll
svcxext 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
43.50 KB (44,544 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\svcxext.dll
security 5.2.3790.0 (srv03_rtm.030324-2048) 5.50
KB (5,632 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\security.dll
iismap 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
58.50 KB (59,904 bytes) 2/16/2006 6:46
Microsoft Corporation
c:\windows\system32\iismap.dll
wamreg 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
54.50 KB (55,808 bytes) 2/16/2006 6:46
Microsoft Corporation
c:\windows\system32\inetinfo\wamreg.dll
w3ssl 6.0.3790.0 (srv03_rtm.030324-2048) 15.00
KB (15,360 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\w3ssl.dll
strmfilt 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
84.00 KB (86,016 bytes) 2/16/2006 6:43
Microsoft Corporation
c:\windows\system32\strmfilt.dll
httpapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
24.00 KB (24,576 bytes) 2/16/2006 6:44
Microsoft Corporation
c:\windows\system32\httpapi.dll
w3core 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
340.50 KB (348,672 bytes) 2/16/2006 6:45
Microsoft Corporation
c:\windows\system32\inetinfo\w3core.dll
lonsint 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
13.00 KB (13,312 bytes) 2/16/2006 6:45

PM Microsoft Corporation
 c:\windows\system32\inetsrv\lonsint.dll
 w3cache 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 19.00 KB (19,456 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\w3cache.dll
 w3tp 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 13.00 KB (13,312 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\w3tp.dll
 w3comlog 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 10.50 KB (10,752 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\w3comlog.dll
 w3dt 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 38.50 KB (39,424 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\w3dt.dll
 iisres 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 120.00 KB (122,880 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\iisres.dll
 w3isapi 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 61.00 KB (62,464 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\w3isapi.dll
 comadmin 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 192.50 KB (197,120 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\com\comadmin.dll
 mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048) 21.50
 KB (22,016 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\mfcsubs.dll
 colbact 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 59.50 KB (60,928 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\colbact.dll
 gzip 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 25.00 KB (25,600 bytes) 2/16/2006 6:45
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\gzip.dll
 iisw3adm 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 211.00 KB (216,064 bytes) 2/16/2006 6:46
 PM Microsoft Corporation
 c:\windows\system32\inetsrv\iisw3adm.dll
 termsrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 239.00 KB (244,736 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\termsrv.dll
 icaapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 12.50 KB (12,800 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\icaapi.dll
 mstlsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 116.00 KB (118,784 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\mstlsapi.dll
 explorer 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 1.00 MB (1,050,624 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\explorer.exe
 browseui 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 1,009.00 KB (1,033,216 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\browseui.dll
 shdocvw 6.0.3790.1830 (srv03_spl_rtm.050324-1447)
 1.43 MB (1,502,720 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\shdocvw.dll

themeui 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 377.50 KB (386,560 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\themeui.dll
 msimg32 5.2.3790.0 (srv03_rtm.030324-2048) 4.50
 KB (4,608 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\msimg32.dll
 linkinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 19.00 KB (19,456 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\linkinfo.dll
 ntshrui 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 140.00 KB (143,360 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\ntshrui.dll
 webcheck 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 272.50 KB (279,040 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\webcheck.dll
 stobject 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 120.50 KB (123,392 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\stobject.dll
 batmeter 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 31.50 KB (32,256 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\batmeter.dll
 powrprof 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 16.50 KB (16,896 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\powrprof.dll
 drprov 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 14.00 KB (14,336 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\drprov.dll
 ntlanman 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 43.50 KB (44,544 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\ntlanman.dll
 netui0 5.2.3790.0 (srv03_rtm.030324-2048) 75.50
 KB (77,312 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\netui0.dll
 netui1 5.2.3790.0 (srv03_rtm.030324-2048)
 184.00 KB (188,416 bytes) 3/25/2003 9:00
 AM Microsoft Corporation
 c:\windows\system32\netui1.dll
 davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50
 KB (24,064 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\davclnt.dll
 urlmon 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 673.00 KB (689,152 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32?urlmon.dll
 browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00
 KB (63,488 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\browselc.dll
 mlang 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 577.50 KB (591,360 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\mlang.dll
 shdoclc 6.00.3790.0 (srv03_rtm.030324-2048)
 588.50 KB (602,624 bytes) 3/25/2003 9:00
 AM Microsoft Corporation
 c:\windows\system32\shdoclc.dll
 zipfldr 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 333.50 KB (341,504 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\zipfldr.dll

actxprxy 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 96.50 KB (98,816 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\actxprxy.dll
 notepad 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 67.00 KB (68,608 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\notepad.exe
 comdlg32 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
 274.50 KB (281,088 bytes) 3/25/2003 9:00
 AM Microsoft Corporation
 c:\windows\system32\comdlg32.dll
 regedit 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 144.00 KB (147,456 bytes) 3/24/2005 8:44
 PM Microsoft Corporation
 c:\windows\regedit.exe
 aclui 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 117.50 KB (120,320 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\aclui.dll
 ulib 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 271.00 KB (277,504 bytes) 3/25/2003 9:00
 AM Microsoft Corporation
 c:\windows\system32\ulib.dll
 clb 5.2.3790.0 (srv03_rtm.030324-2048) 11.50
 KB (11,776 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\clb.dll
 dllhost 5.2.3790.0 (srv03_rtm.030324-2048) 5.50
 KB (5,632 bytes) 3/25/2003 9:00 AM Microsoft
 Corporation c:\windows\system32\dllhost.exe
 txflg 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 96.50 KB (98,816 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\txflg.dll
 xolehlp 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 10.50 KB (10,752 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\xolehlp.dll
 msdtcprx 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 455.50 KB (466,432 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\msdtcprx.dll
 mtxcclu 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 77.00 KB (78,848 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\mtxcclu.dll
 resutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 63.50 KB (65,024 bytes) 2/16/2006 6:43
 PM Microsoft Corporation
 c:\windows\system32\resutils.dll
 catsrv 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 273.00 KB (279,552 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\catsrv.dll
 catsrvps 2001.12.4720.0 (srv03_rtm.030324-2048) 23.50
 KB (24,064 bytes) 2/10/2006 11:58 AM Microsoft
 Corporation c:\windows\system32\catsrvps.dll
 catsrvut 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 608.00 KB (622,592 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\catsrvut.dll
 clbcatex 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
 102.50 KB (104,960 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\clbcatex.dll
 mmc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
 829.00 KB (848,896 bytes) 2/16/2006 6:44
 PM Microsoft Corporation
 c:\windows\system32\mmc.exe

```

mfc42u 6.06.8063.0 1.11 MB (1,163,776 bytes)
2/16/2006 6:44 PM Microsoft Corporation
c:\windows\system32\mfc42u.dll
odbc32 3.526.1830.0 (srv03_spl_rtm.050324-1447)
240.00 KB (245,760 bytes) 2/16/2006 6:43
PM
Microsoft Corporation
c:\windows\system32\odbc32.dll
mmcbase 5.2.3790.0 (srv03_rtm.030324-2048) 70.50
KB (72,192 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\mmcbase.dll
oleacc 4.2.5406.0 (srv03_rtm.030324-2048)
171.00 KB (175,104 bytes) 3/25/2003 9:00
AM
Microsoft Corporation
c:\windows\system32\oleacc.dll
odbcint 3.526.1830.0 (srv03_spl_rtm.050324-1447)
92.00 KB (94,208 bytes) 2/16/2006 6:43
PM
Microsoft Corporation
c:\windows\system32\odbcint.dll
mmcndmgr 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
1.17 MB (1,229,824 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\mmcndmgr.dll
filemgmt 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
335.50 KB (343,552 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\filemgmt.dll
cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50
KB (17,920 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\cfgmgr32.dll
els 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
196.50 KB (201,216 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\els.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3.50
KB (3,584 bytes) 3/25/2003 9:00 AM Microsoft
Corporation c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439.00 KB (449,536 bytes)
2/16/2006 6:43 PM Microsoft Corporation
c:\windows\system32\riched20.dll
comsnap 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
188.00 KB (192,512 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\comsnap.dll
dsuixt 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
116.50 KB (119,296 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\dsuixt.dll
mfc42 6.06.8063.0 1.11 MB (1,160,704 bytes)
2/16/2006 6:44 PM Microsoft Corporation
c:\windows\system32\mfc42.dll
comuid 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
582.50 KB (596,480 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\comuid.dll
msdtcuui 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
162.00 KB (165,888 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\msdtcuui.dll
stclient 2001.12.4720.1830 (srv03_spl_rtm.050324-1447)
62.50 KB (64,000 bytes) 2/16/2006 6:43
PM
Microsoft Corporation
c:\windows\system32\stclient.dll
dsadmin 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
619.00 KB (633,856 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\dsadmin.dll
dsprop 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
150.00 KB (153,600 bytes) 2/16/2006 6:44

```

```

PM Microsoft Corporation
c:\windows\system32\dsprop.dll
adprop 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
759.50 KB (777,728 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\adprop.dll
imm32 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
108.00 KB (110,592 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\imm32.dll
helpctr 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
778.00 KB (796,672 bytes) 2/16/2006 6:45
PM
Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.
exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50
KB (6,656 bytes) 2/10/2006 12:01 PM Microsoft
Corporation
c:\windows\pchealth\helpctr\binaries\hcappres
.dll
itss 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
133.50 KB (136,704 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\itss.dll
pchshell 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
104.50 KB (107,008 bytes) 2/16/2006 6:45
PM
Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell
.dll
mshtml 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
2.96 MB (3,108,864 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142.00 KB (145,408 bytes)
2/16/2006 6:44 PM Microsoft Corporation
c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
156.00 KB (159,744 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
311.00 KB (318,464 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\msctf.dll
jscript 5.6.0.8827 448.00 KB (458,752 bytes)
2/16/2006 6:44 PM Microsoft Corporation
c:\windows\system32\jscript.dll
mshtmlled 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
454.50 KB (465,408 bytes) 2/16/2006 6:44
PM
Microsoft Corporation
c:\windows\system32\mshtmlled.dll
vbscript 5.6.0.8827 392.00 KB (401,408 bytes)
2/16/2006 6:43 PM Microsoft Corporation
c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
376.00 KB (385,024 bytes) 2/16/2006 6:45
PM
Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.d
ll
helpsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
745.00 KB (762,880 bytes) 2/16/2006 6:45
PM
Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpsvc.
exe
[Services]
Display Name Name State Start Mode
Service Type Path Error Control
Start Name Tag ID
Application Experience Lookup Service AeLookupSvc
Running Auto Share Process

```

```

c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Alerter Alerter Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Application Layer Gateway Service ALG
Stopped Manual Own Process
c:\windows\system32\alg.exe Normal NT
AUTHORITY\LocalService 0
Application Management AppMgmt Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Audio AudioSrv Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Background Intelligent Transfer Service BITS
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Computer Browser Browser Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Indexing Service Csvc Stopped Disabled Share
Process c:\windows\system32\ciscv.exe Normal
LocalSystem 0
ClipBook ClipSrv Stopped Disabled Own Process
c:\windows\system32\clipsrv.exe
Normal LocalSystem 0
COM+ System Application COMSysApp Running
Manual Own Process
c:\windows\system32\dllhost.exe
/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}
Normal LocalSystem 0
Cryptographic Services CryptSvc Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DCOM Server Process Launcher DcomLaunch
Running Auto Share Process
c:\windows\system32\svchost.exe -k dcomlaunch
Normal LocalSystem 0
Distributed File System Dfs Stopped
Manual Own Process
c:\windows\system32\dfssvc.exe
Normal LocalSystem 0
DHCP Client Dhcp Running Auto Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service
dmadmin Stopped Manual Share Process
c:\windows\system32\dmadmin.exe /com
Normal LocalSystem 0
Logical Disk Manager dmserver Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DNS Client Dnscache Running Auto Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Running Auto
Share Process
c:\windows\system32\svchost.exe -k winerr
Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
c:\windows\system32\services.exe
Normal LocalSystem 0
COM+ Event System EventSystem Running Auto
Share Process

```



```

c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Help and Support helpsvc Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Human Interface Device Access HidServ Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HTTP SSL HTTPFilter Running Manual Share
Process c:\windows\system32\inetrv\inetinfo.exe
Normal LocalSystem 0
IIS Admin Service IISADMIN Running Auto Share
Process c:\windows\system32\inetrv\inetinfo.exe
Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapService
Stopped Disabled Own Process
c:\windows\system32\imapi.exe Normal
LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own
Process c:\windows\system32\ismsserv.exe
Normal LocalSystem 0
Kerberos Key Distribution Center kdc
Stopped Disabled Own Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Server lanmanserver Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Workstation lanmanworkstation Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
License Logging LicenseService Stopped
Disabled Own Process
c:\windows\system32\llsdrv.exe
Normal NT AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper LmHosts Running Auto
Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Messenger Messenger Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
NetMeeting Remote Desktop Sharing mnmrsv
Stopped Disabled Own Process
c:\windows\system32\mnmrsv.exe
Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC
Running Auto Own Process
c:\windows\system32\msdtc.exe Normal NT
AUTHORITY\NetworkService 1
Windows Installer MSIInstaller Stopped Manual Share
Process c:\windows\system32\msiexec.exe /v
Normal LocalSystem 0
Network DDE NetDDE Stopped Disabled Share
Process c:\windows\system32\netdde.exe
Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped
Disabled Share Process
c:\windows\system32\netdde.exe
Normal LocalSystem 0
Net Logon Netlogon Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Network Connections Netman Running Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Location Awareness (NLA) Nla
Running Manual Share Process

```

```

c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
File Replication NtFrs Stopped Manual Own
Process c:\windows\system32\ntfrs.exe Ignore
LocalSystem 0
NT LM Security Support Provider NtLmSsp
Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Removable Storage NtmsSvc Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Plug and Play PlugPlay Running Auto Share
Process c:\windows\system32\services.exe
Normal LocalSystem 0
IPSEC Services PolicyAgent Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Protected Storage ProtectedStorage Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Remote Access Auto Connection Manager RasAuto
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Access Connection Manager RasMan
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Desktop Help Session Manager RDSessMgr
Stopped Manual Own Process
c:\windows\system32\sessmgr.exe
Normal LocalSystem 0
Routing and Remote Access RemoteAccess
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Registry RemoteRegistry Running Auto
Share Process
c:\windows\system32\svchost.exe -k regsvc
Normal NT AUTHORITY\LocalService 0
Remote Procedure Call (RPC) Locator RpcLocator
Stopped Manual Own Process
c:\windows\system32\locator.exe
Normal NT AUTHORITY\NetworkService 0
Remote Procedure Call (RPC) RpcSs Running Auto
Share Process
c:\windows\system32\svchost.exe -k rpcss
Normal NT Authority\NetworkService 0
Resultant Set of Policy Provider RSOPProv
Stopped Manual Share Process
c:\windows\system32\rsopprov.exe
Normal LocalSystem 0
Special Administration Console Helper sacsvr
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Security Accounts Manager SamSs Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Smart Card SCardSvr Stopped Manual Share
Process c:\windows\system32\scardsvr.exe
Ignore NT AUTHORITY\LocalService 0

```

```

Task Scheduler Schedule Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Secondary Logon seclogon Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
System Event Notification SENS Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Firewall/Internet Connection Sharing (ICS)
SharedAccess Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Shell Hardware Detection ShellHWDetection
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Print Spooler Spooler Running Auto Own
Process c:\windows\system32\spoolsv.exe
Normal LocalSystem 0
Windows Image Acquisition (WIA) stisvc
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k imgsvc
Normal NT AUTHORITY\LocalService 0
Microsoft Software Shadow Copy Provider swprv
Stopped Manual Own Process
c:\windows\system32\svchost.exe -k swprv
Normal LocalSystem 0
Performance Logs and Alerts SysmonLog Stopped
Manual Own Process
c:\windows\system32\smlogsvc.exe
Normal NT Authority\NetworkService 0
Telephony Tapisrv Stopped Manual Share Process
c:\windows\system32\svchost.exe -k tapisrv
Normal LocalSystem 0
Terminal Services TermService Running
Manual Share Process
c:\windows\system32\svchost.exe -k termsvc
Normal LocalSystem 0
Themes Themes Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Telnet TlntSvr Stopped Disabled Own Process
c:\windows\system32\tlntsvr.exe
Normal NT AUTHORITY\LocalService 0
Distributed Link Tracking Server TrkSvr
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Distributed Link Tracking Client TrkWks
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Terminal Services Session Directory Tssdis
Stopped Disabled Own Process
c:\windows\system32\tssdis.exe
Normal LocalSystem 0
Windows User Mode Driver Framework UMWdf
Stopped Manual Own Process
c:\windows\system32\wdfmgvr.exe
Normal NT AUTHORITY\LocalService 0
Upload Manager uploadmgr Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Uninterruptible Power Supply UPS Stopped
Manual Own Process

```

```

c:\windows\system32\ups.exe Normal NT
AUTHORITY\LocalService 0
Virtual Disk Service vds Stopped
Manual Own Process
c:\windows\system32\vds.exe Normal
LocalSystem 0
Volume Shadow Copy VSS Stopped Manual Own
Process c:\windows\system32\vssvc.exe Normal
LocalSystem 0
Windows Time W32Time Running Auto Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
World Wide Web Publishing Service W3SVC
Running Auto Share Process
c:\windows\system32\svchost.exe -k iissvcs
Normal LocalSystem 0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
WinHTTP Web Proxy Auto-Discovery Service
WinHttpAutoProxySvc Stopped Manual Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Windows Management Instrumentation winmgmt
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Portable Media Serial Number Service WmdmPmSN
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Management Instrumentation Driver Extensions
Wmi Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped
Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe
Normal LocalSystem 0
Automatic Updates wuauserv Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Wireless Configuration WZCSVC Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Provisioning Service xmlprov Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

[Program Groups]

```

Group Name Name User Name
Accessories Default User:Accessories
Default User
Accessories\Accessibility Default
User:Accessories\Accessibility Default User
Accessories\Entertainment Default
User:Accessories\Entertainment Default User
Startup Default User:Startup Default User
Accessories All Users:Accessories All
Users
Accessories\Accessibility All
Users:Accessories\Accessibility All Users

```

```

Accessories\Communications All
Users:Accessories\Communications All Users
Accessories\Entertainment All
Users:Accessories\Entertainment All Users
Accessories\System Tools All
Users:Accessories\System Tools All Users
Administrative Tools All Users:Administrative
Tools All Users
Startup All Users:Startup All Users
Accessories NT AUTHORITY\SYSTEM:Accessories
NT AUTHORITY\SYSTEM
Accessories\Accessibility NT
AUTHORITY\SYSTEM:Accessories\Accessibility NT
AUTHORITY\SYSTEM
Accessories\Entertainment NT
AUTHORITY\SYSTEM:Accessories\Entertainment NT
AUTHORITY\SYSTEM
Startup NT AUTHORITY\SYSTEM:Startup NT
AUTHORITY\SYSTEM
Accessories CLI05\Administrator:Accessories
CLI05\Administrator
Accessories\Accessibility
CLI05\Administrator:Accessories\Accessibility
CLI05\Administrator
Accessories\Entertainment
CLI05\Administrator:Accessories\Entertainment
CLI05\Administrator
Administrative Tools
CLI05\Administrator:Administrative Tools
CLI05\Administrator
Startup CLI05\Administrator:Startup
CLI05\Administrator

```

[Startup Programs]

```

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM
Startup
CTFMON.EXE c:\windows\system32\ctfmon.exe
NT AUTHORITY\SYSTEM HKU\S-1-5-
18\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
CTFMON.EXE c:\windows\system32\ctfmon.exe
NT AUTHORITY\LOCAL SERVICE HKU\S-1-5-
19\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
CTFMON.EXE c:\windows\system32\ctfmon.exe
NT AUTHORITY\NETWORK SERVICE HKU\S-1-5-
20\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
desktop desktop.ini CLI05\Administrator
Startup
desktop desktop.ini .DEFAULT Startup
CTFMON.EXE .DEFAULT c:\windows\system32\ctfmon.exe
HKU\DEFAULT\SOFTWARE\Microsoft\Windows\Curre
ntVersion\Run
desktop desktop.ini All Users Common Startup

```

[OLE Registration]

```

Object Local Server
Sound (OLE2) sndrec32.exe
Media Clip mplay32.exe
Video Clip mplay32.exe /avi
MIDI Sequence mplay32.exe /mid
Sound Not Available
Media Clip Not Available
WordPad Document "%programfiles%\windows
nt\accessories\wordpad.exe"
Windows Media Services DRM Storage object Not
Available
Bitmap Image mspaint.exe

```

[Windows Error Reporting]

```
Time Type Details
```

[Internet Settings]

[Internet Explorer]

[Following are sub-categories of this main category]
[Summary]

```

Item Value
Version 6.0.3790.1830
Build 63790.1830
Application Path C:\Program Files\Internet Explorer
Language English (United States)
Active Printer Not Available
Cipher Strength 128-bit
Content Advisor Disabled
IEAK Install No

```

[File Versions]

```

File Version Size Date Path
Company
actxprxy.dll 6.0.3790.1830 97 KB
3/24/2005 5:55:26 PM
C:\WINDOWS\system32 Microsoft Corporation
advpack.dll 6.0.3790.1830 98 KB
3/24/2005 5:55:28 PM
C:\WINDOWS\system32 Microsoft Corporation
asctrls.ocx 6.0.3790.0 90 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
browselc.dll 6.0.3790.0 62 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
browseui.dll 6.0.3790.1830 1,009 KB
3/24/2005 5:56:10 PM
C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll 6.0.3790.1830 149 KB
3/24/2005 5:56:32 PM
C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll 5.82.3790.1830 585 KB
3/24/2005 5:57:56 PM
C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll 6.3.3790.1830 205 KB
3/24/2005 6:00:58 PM
C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll 6.3.3790.1830 355 KB
3/24/2005 6:00:58 PM
C:\WINDOWS\system32 Microsoft Corporation
iecont.dll <File Missing> Not Available
Not Available Not Available Not
Available
iecontlc.dll <File Missing> Not Available
Not Available Not Available Not
Available

```

```

iedkcs32.dll      16.0.3790.1830      324 KB
3/24/2005 6:04:58 PM
C:\WINDOWS\system32 Microsoft Corporation

iepeers.dll      6.0.3790.1830      248 KB
3/24/2005 6:04:58 PM
C:\WINDOWS\system32 Microsoft Corporation

iesetup.dll      6.0.3790.1830      61 KB
3/24/2005 6:04:58 PM
C:\WINDOWS\system32 Microsoft Corporation

ieunit.inf       Not Available      24 KB
3/24/2005 6:04:58 PM
C:\WINDOWS\system32 Not Available

iexplore.exe     6.0.3790.1830      92 KB
3/24/2005 6:04:58 PM      C:\Program
Files\Internet Explorer      Microsoft Corporation

imgutil.dll      6.0.3790.1830      38 KB
3/24/2005 6:05:04 PM
C:\WINDOWS\system32 Microsoft Corporation

inetcpl.cpl      6.0.3790.1830      358 KB
3/24/2005 6:05:06 PM
C:\WINDOWS\system32 Microsoft Corporation

inetcplc.dll     6.0.3790.0          109 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

inseng.dll       6.0.3790.1830      94 KB
3/24/2005 6:05:06 PM
C:\WINDOWS\system32 Microsoft Corporation

mlang.dll 6.0.3790.1830      578 KB 3/24/2005
6:07:20 PM      C:\WINDOWS\system32 Microsoft
Corporation

msencode.dll     2002.10.4.0        112 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32  罂星罂w罂物

mshta.exe 6.0.3790.1830      30 KB 3/24/2005
6:07:26 PM      C:\WINDOWS\system32 Microsoft
Corporation

mshtml.dll      6.0.3790.1830      3,036 KB
3/24/2005 6:07:26 PM
C:\WINDOWS\system32 Microsoft Corporation

mshtml.tlb     6.0.3790.1830      1,320 KB
3/24/2005 6:07:26 PM
C:\WINDOWS\system32 Microsoft Corporation

mshtmlmled.dll  6.0.3790.1830      455 KB
3/24/2005 6:07:26 PM
C:\WINDOWS\system32 Microsoft Corporation

mshtmlmer.dll  6.0.3790.1830      56 KB
3/24/2005 6:07:26 PM
C:\WINDOWS\system32 Microsoft Corporation

msident.dll     6.0.3790.1830      48 KB
3/24/2005 6:07:28 PM
C:\WINDOWS\system32 Microsoft Corporation

msidentld.dll  6.0.3790.0          15 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

msieftpl.dll   6.0.3790.1830      244 KB
3/24/2005 6:07:28 PM
C:\WINDOWS\system32 Microsoft Corporation

```

```

msrating.dll    6.0.3790.1830      144 KB
3/24/2005 6:07:36 PM
C:\WINDOWS\system32 Microsoft Corporation

mstime.dll     6.0.3790.1830      523 KB
3/24/2005 6:07:38 PM
C:\WINDOWS\system32 Microsoft Corporation

occache.dll    6.0.3790.1830      94 KB
3/24/2005 6:08:34 PM
C:\WINDOWS\system32 Microsoft Corporation

proctexe.ocx   6.3.3790.1830      83 KB
3/24/2005 6:12:26 PM
C:\WINDOWS\system32 Intel Corporation

sendmail.dll   6.0.3790.1830      56 KB
3/24/2005 6:13:36 PM
C:\WINDOWS\system32 Microsoft Corporation

shdoclc.dll    6.0.3790.0          589 KB
3/25/2003 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

shdocvw.dll    6.0.3790.1830      1,468 KB
3/24/2005 6:13:36 PM
C:\WINDOWS\system32 Microsoft Corporation

shfolder.dll   6.0.3790.1830      25 KB
3/24/2005 6:13:36 PM
C:\WINDOWS\system32 Microsoft Corporation

shlwapi.dll    6.0.3790.1830      314 KB
3/24/2005 6:13:40 PM
C:\WINDOWS\system32 Microsoft Corporation

tdc.ocx 1.3.0.3130      58 KB 3/25/2003
9:00:00 AM      C:\WINDOWS\system32 Microsoft
Corporation

url.dll 6.0.3790.1830      37 KB 3/24/2005
6:26:12 PM      C:\WINDOWS\system32 Microsoft
Corporation

urlmon.dll     6.0.3790.1830      673 KB
3/24/2005 6:26:12 PM
C:\WINDOWS\system32 Microsoft Corporation

webcheck.dll   6.0.3790.1830      273 KB
3/24/2005 6:26:16 PM
C:\WINDOWS\system32 Microsoft Corporation

wininet.dll    6.0.3790.1830      646 KB
3/24/2005 6:26:18 PM
C:\WINDOWS\system32 Microsoft Corporation

[Connectivity]

Item Value
Connection Preference      Never dial

LAN Settings

AutoConfigProxy      wininet.dll
AutoProxyDetectMode Disabled
AutoConfigURL
Proxy      Disabled
ProxyServer
ProxyOverride

[Cache]

[ Following are sub-categories of this main category ]
[Summary]

```

```

Item Value
Page Refresh Type      Automatic
Temporary Internet Files Folder      C:\Documents
and Settings\Administrator\Local Settings\Temporary
Internet Files
Total Disk Space      Not Available
Available Disk Space      Not Available
Maximum Cache Size      Not Available
Available Cache Size      Not Available

```

[List of Objects]

```

Program File      Status      CodeBase
No cached object information available

```

[Content]

```

[ Following are sub-categories of this main category ]
[Summary]

```

```

Item Value
Content Advisor      Disabled

```

[Personal Certificates]

```

Issued To Issued By Validity Signature Algorithm
No personal certificate information available

```

[Other People Certificates]

```

Issued To Issued By Validity Signature Algorithm
No other people certificate information available

```

[Publishers]

```

Name
No publisher information available

```

[Security]

```

Zone Security Level
My Computer      Custom
Local intranet      Custom
Trusted sites      Custom
Internet Custom
Restricted sites      Custom

```

Benchcraft Profile

```

Profile: RTE_Profile
File Path:      D:\Audit 1P
2006\PerfRun_20060323\RTE_Profile.xml
Version: 5

```

Number of Engines: 8

```

Name: DRIVER01
Description:
Directory:
c:\benchcraft\rte01_0.log
Machine: rte01

```

```

Parameter Set: PARAM2
Index: 0
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER1758937
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER02
Description:
Directory:
c:\benchcraft\rte01_1.log
Machine: rte01
Parameter Set: PARAM2
Index: 100000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER2882468
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER03
Description:
Directory:
c:\benchcraft\rte01_2.log
Machine: rte01
Parameter Set: PARAM2
Index: 200000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER3911515
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER04
Description:
Directory:
c:\benchcraft\rte01_3.log
Machine: rte01
Parameter Set: PARAM2
Index: 300000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER4950828
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER05
Description:
Directory:
c:\benchcraft\rte02_0.log
Machine: rte02

```

```

Parameter Set: PARAM2
Index: 400000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER51572062
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER06
Description:
Directory:
c:\benchcraft\rte02_1.log
Machine: rte02
Parameter Set: PARAM2
Index: 500000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER61651937
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER07
Description:
Directory:
c:\benchcraft\rte03_0.log
Machine: rte03
Parameter Set: PARAM2
Index: 600000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER7306890
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER08
Description:
Directory:
c:\benchcraft\rte03_1.log
Machine: rte03
Parameter Set: PARAM2
Index: 700000000
Seed: 90475
Configured Users: 5750
Pipe Name: DRIVER8359515
Connect Rate: 300
Start Rate: 300
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Number of User groups: 8

Driver Engine: DRIVER01
IIS Server: cli01
SQL Server: nocona_quad

```

```

Database: TPCC
User: sa
Protocol: HTML
w_id Range: 1 - 575
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER02
IIS Server: cli01
SQL Server: nocona_quad
Database: TPCC
User: sa
Protocol: HTML
w_id Range: 576 - 1150
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER03
IIS Server: cli03
SQL Server: nocona_quad
Database: TPCC
User: sa
Protocol: HTML
w_id Range: 1151 - 1725
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER04
IIS Server: cli03
SQL Server: nocona_quad
Database: TPCC
User: sa
Protocol: HTML
w_id Range: 1726 - 2300
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER05
IIS Server: cli04
SQL Server: nocona_quad
Database: TPCC
User: sa
Protocol: HTML
w_id Range: 2301 - 2875
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER06
IIS Server: cli04
SQL Server: nocona_quad
Database: TPCC
User: sa

```

```

Protocol: HTML
w_id Range: 2876 - 3450
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER07
IIS Server: cli05
SQL Server: nocona_quad
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 3451 - 4025
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

Driver Engine: DRIVER08
IIS Server: cli05
SQL Server: nocona_quad
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 4026 - 4600
w_id Min Warehouse: 1
w_id Max Warehouse: 4600
Scale: Normal
User Count: 5750
District id: 1
Scale Down: No

```

```

5.05      2.01      Stock Level      402.00
           0.10      20.00           0.10
10.05     2.01      Order Status     402.00
           0.10      5.00            0.10

```

Number of Parameter Sets: 2

```

~Default
Default Parameter Set

```

RT	RT	Menu	Txn	Think	Key
Time	Delay	Fence	Delay	Weight	Time
		New Order	4492.00		
1.00	1205.00	1801.00	1.00	5.00	
		Payment	4302.00		
1.00	1205.00	301.00	1.00	5.00	
		Delivery	402.00		
505.00	201.00	1.00	5.00	1.00	
		Stock Level	402.00		
505.00	201.00	1.00	20.00	1.00	
		Order Status	402.00		
1.00	1005.00	201.00	1.00	5.00	


```

PARAM2
Agora vai dimai!!!!

```

RT	RT	Menu	Txn	Think	Key
Time	Delay	Fence	Delay	Weight	Time
		New Order	4492.00		
12.05	18.01	0.10	5.00	0.10	
		Payment	4302.00		
12.05	3.01	0.10	5.00	0.10	
		Delivery	402.00		
5.05	2.01	0.10	5.00	0.10	

Appendix D – 60-Day Space

TPC-C 60 Day Space Requirements						
Warehouses	6800				TpmC	85.858,78
Table	Rows	Data KB	Index KB	Extra 5% KB	8hr Space	Total Space KB
Warehouse	6800	728	80	40		848
District	68000	7560	96	383		8039
Customer	204000000	148363656	9257032	7.881.034		165501722
History	204000000	11912416	44536		2.568.708	11956952
NewOrder	61199998	1090432	2792	54.661		1147885
Orders	204000000	6661248	3249464		8.159.734	9910712
OrderLine	2039997667	133770360	315136		49.505.987	134085496
Item	100000	9416	96	476		9988
Stock	680000000	217600008	458872	10.902.944		228961824
Total		519.415.824	13.328.104	18.839.538	60.234.430	551.583.466
	MB					
Dynamic Space	148.773	Sum of Data for Order, Orderline and History				
Static Space	389.882	Sum of Data+Index+5%-Dynamic Space				
Free Space	na	Total Allocated Spac - (Dynamic + Static Space)				
Daily Growth	30.055	(Dynamic Space/(W*62.5))*tpmc				
Daily Spread	-	(Free Space -1.5*Daily Growth) Zero Assumed				
60 Day Space MB	2.193.201					
60 Day Space GB	2.141,80					GB
Log Size	200.000,00					MB
KB Per New Order	5,31					KB
8 hr log MB	213.698					MB
8 hr log GB	208.6894					GB
		Disks	Disks	Formatted	Space	
Space Usage	GB Needed	Measured	Size	Size	Available	
180 Day Space DB	2.141,80	0	18GB	16,900	0,00	
		238	36GB	34,332	8171,02	
			4GB	3,999	0,00	
Total DB		238,00			8171,02	
8-hr log + mirror	417,3789	14	36GB	34,332	480,65	
OS, Swap	3	1	9GB	34,332	34,33	
Total Storage	2.562,18				8.686,00	

The file groups are reported in 8K pages from the sysfile table.

Misc_fg	CS_fg
848	
8039	
0	165501722
14525660	
1147885	
18070446	
183591483	
9988	
0	228961824
217.354.350	394.463.546
files=	8
size=	5.120.000
Total=	43.520.000
8K blocks	348.160.000
Needed =	217.354.350
OK	OK

tpmC		85.858,78								
	Data Before KB	Index Before KB	Data After KB	Index After KB	Data Grow KB	Index Grow KB	Total Grow KB	KB/New-Order	8-Hr Growth KB	8-Hr Growth MB
History	11.912.416	44.536	13408272	88832	1.495.856	44.296	1.540.152	0,0623	2.568.708,38	2.508,50
Order	6.661.248	3.249.464	8332648	6470496	1.671.400	3.221.032	4.892.432	0,1980	8.159.734,30	7.968,49
Order-Line	133.770.360	315.136	163142384	626024	29.372.024	310.888	29.682.912	1,2012	49.505.987,02	48.345,69
										58.822,69
	sum(*) Before		sum(*) After		Num New-Order					
d_next_o_id	204.068.000		228.778.113		24.710.113					
	Before MB		After MB		Grow MB				8-Hr Growth MB	8-Hr Growth GB
Log	522,48		128652,01		128129,53			5,3098	213.697,99	208,69
Database tpcc log used (%)								5.437.1887	bytes	
	200000	0,26124048	64,326004							